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Resilience in Adolescent Mental Health

By

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A thesis submitted in fulfilment of the requirements for the degree of
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List of Terms and Abbreviations

AA	Aggression assessment (Werner & Nixon, 2005)
ADHD	Attention Deficit Hyperactivity Disorder
ADIS	Anxiety Disorder Interview Schedule (Silverman & Albano, 1996) Portuguese version (Pereira & Barros, 2010)
ANOVA	Analysis of Variance
β	Beta (Standardized)
B	Beta (Unstandardized)
B/VP	Bully/Victim Problems (Olweus, 1991)
BAI	Bullying assessment items (Wolke et al., 2001)
BBBA	Bullying, being bullied and aggression (Roland & Idsøe, 2001)
BI	Bullying Inventory (Olweus, 1989)
BIOSIS	Biosciences Information Service
BPYSOM	Bully Proofing Your School Outcomes Measures (Menard & Grotspeter, 2014)
BSI	Brief Symptom Inventory (Derogatis & Spencer, 1982)
CatPCA	Categorical Principal Component Analysis
CATS	Children's Automatic Thoughts Scale (Schniering & Rapee, 2002)
CBCL-YSR	Child Behaviour Checklist-Youth Self Report (Achenbach, 1991)
CBT	Cognitive Behavioural Therapy
CSK	Coping Strategy Knowledge (Watson et al., 2010)
DSM	The Diagnostic and Statistical Manual of Mental Disorders
DSS	Decision Support System
DTW	Doing things wrong
EB	Experiences of bullying (Slee, 2002)
ERIC	Education Resources information Center
ESTAS	Environmental School Transition Anxiety Scale
ESTAS change	The change in pupils' environmental worries about secondary school from pre-transition to post-transition
GAD	Generalised Anxiety Disorder
GSA	Gay-Straight Alliances
HCATS	Homophobic Content Agent Target Scale
IS	Interpersonal Self-Assurance
ISTAS	Interpersonal School Transition Anxiety Scale

ISTAS change	The change in pupils' interpersonal worries about secondary school from pre-transition to post-transition
KAB	Knowledge About Bullying (Watson et al., 2010)
LGB	Lesbian, Gay, Bisexual
LGBT	Lesbian, Gay, Bisexual, Transgender
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Questioning
MDD	Major Depressive Disorder
MEDLINE	Medical Literature Analysis and Retrieval System
N	Number
OB/VQ	Olweus' Bully/Victim Questionnaire (Olweus, 1993)
OCD	Obsessive Compulsive Disorder
ODD	Oppositional Defiant Disorder
PBFS	The Problem Behaviour Frequency Scales
Post ESTAS	Pupils' environmental worries about secondary school, after transition
Post ISTAS	Pupils' interpersonal worries about secondary school, after transition
Post State	Pupils' state anxiety scores, after transition
Post Trait	Pupils' trait anxiety scores, after transition
PPSEQ	Pre- and Post-Student Evaluation Questionnaire (Hampton et al., 2010)
PRB/VR	Participant role in bully/victims' relationships (Menesini & Gini, 2000)
Pre ESTAS	Pupils' environmental worries about secondary school, before transition
Pre ISTAS	Pupils' interpersonal worries about secondary school, before transition
Pre State	Pupils' state anxiety scores, before transition
Pre Trait	Pupils' trait anxiety scores, before transition
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PRQ	Participant Role Questionnaire (Salmivalli et al., 1996)
PRS	Participant Role Scale (Salmivalli et al., 1996)
PTSD	Post-Traumatic Stress Disorder
PVQ	Peer Victimization Questionnaire (Lopez, 1997)
PVS	Pro victim scale (Rigby & Slee, 1991)

PVSBBS	Peer Victimisation Scale and the Bullying Behaviour Scale (Austin & Joseph, 1996)
PWBS	Psychological Well-Being Scale (Ryff, 1989)
RCADS	Revised Child Anxiety and Depression Scale (Chorpita et al., 2000; Chorpita, Moffitt & Grey, 2005; Sandin et al., 2010)
RCMAS	Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978; 1979; 1985)
RCT	Randomized Controlled trial
ROB/VQ	Revised Olweus' Bully/Victim Questionnaire (Olweus, 1996)
RPQ	Reactive–Proactive Aggression Questionnaire (Raine et al., 2006)
SC	Stigma-consciousness
SCARED-R	Screen for Child Anxiety Related Emotional Disorders Revised Version (Muris et al., 1999)
SCAS	Spence Children's Anxiety Scale (Spence, 1997; 1998)
SCC	The Students Classroom Climate
SciELO	Scientific Electronic Library Online
SD	Standard Deviation
SE B	Standard Error
SES	The Student Experience Survey (Dietsch et al., 2000)
SIB/C	The Scale of Identifying Bullying/ Child Form (Pişkin & Ayas, 2007)
Sig	Significance
SIS	Social Interactions Survey (DeRosier, 2002)
SQ	Symptom Questionnaire (Kellner, 1987)
SSPS	The School Safety Problems-Student (Multisite Violence Prevention Project, 2004)
State change	The change in pupils' state anxiety scores from pre-transition to post-transition
Trait change	The change in pupils' trait anxiety scores from pre-transition to post-transition
WEMWBS	Warwick-Edinburgh Mental Well-Being Scale

Definitions

Adolescence	The period of time in which a young person grows from a child into an adult. Whilst the term 'teenager' includes ages 10 to 19, adolescence can continue until an individual is 25 years old (Sawyer, Azzopardi, Wickremarathne, & Patton, 2018).
Childhood	Legally, individuals under the age of 18. For this research, childhood is thought to be the stage before, or at the beginning of, adolescence. Essentially, individuals progress from childhood to adolescence in their journey to becoming an adult.
Mediating	This explains the relationship between two variables,
Mental Health	cognitive, emotional, and psychological health
Mental Health Problems	A wide range of mental health conditions; disorders that affect your mood, thinking, and behaviour.
Mental Wellbeing	the absence of distress, whilst feeling challenged but possessing the ability to thrive (Shanafelt et al. 2005).
Mitigating	To lessen the damage of something
Moderating	To influence the strength of a relationship between two other variables.

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Declaration

This thesis is submitted to the University of Warwick in support of my application for the degree of Doctor of Philosophy. It has been composed by myself, Charlotte Fontaine, and has not been submitted in any previous application for any degree.

Abstract

Background: Previous research has defined resilience in a variety of ways. Therefore, in order to determine how resilience works within adolescent mental health, adolescent groups facing diverse challenges need to be explored.

Objective: The aim of this research is to further define resilience, specifically in the context of adolescent mental health. This research intends to reveal those who do well despite facing major challenges and determine the assets and resources that confer resilience for these individuals. Specific factors might be found to separate those who negotiate the challenges well and those who do not.

Methods: The current literature surrounding the concept of resilience was explored through a literature review. The available interventions for child anxiety and bullying was explored through a scoping review. The resilience of two separate adolescent groups was investigated; young adolescents as they transitioned from primary school to secondary school and bullied LGBTQ adolescents. By including two very different groups from opposite ends of adolescence, the evolution of resilience throughout adolescence was observed. The outcomes of these adolescents were determined by anxiety and wellbeing measures. Good outcomes, therefore, suggested higher resilience in order to negotiate the challenges they encountered. Potential resilience factors were measured and compared between those who emerged with either good or poor outcomes, determining which factors were associated with good outcomes and, therefore, resilience.

Results: The results of the research suggested that personal and social factors in the form of self-belief and perceived social support were both associated with resilience; these factors potentially provided adolescents with the skills necessary to overcome challenges.

Conclusions: Resilience is both internal and external to the individual, each unique adolescent group requires their own specific assets and resources to overcome challenges.

Introduction

Background of the Research

Kessler et al. (2005) found that the lifetime prevalence for anxiety was 28%, mood disorder was 20.8%, impulse control disorder was 24.8%, substance use disorder was 14.6%; and for any disorder the prevalence was 46.4%. This research suggested that nearly half of the population has experienced a mental health problem at some point in their lifetime. Half of all lifetime mental health disorders will have started by the age of 14, and 75% will have begun by 24 years old; for example, the average age of onset for anxiety was found to be 11 years old (Kessler et al., 2005). Therefore, most mental health disorders presented themselves during adolescence and can persist into adulthood.

The prevalence of mental health disorders has been found to differ between groups of adolescents. Reiss (2013) conducted a systematic review examining the mental health of socioeconomically disadvantaged adolescence. The review found that these adolescents were two to three times more likely to have developed a mental health problem, compared to non-disadvantaged adolescents. A low socioeconomic status that persisted over time was strongly associated with more mental health problems. Lansford et al. (2006) found that children of divorce or parental separation were more likely to show internalizing symptoms, if the separation or divorce occurred early in the child's life. Hudson (2005) also found that marital distress and separation was associated with child psychopathology. Copeland et al. (2013) assessed the mental health of 1,420 adolescents who were bullies, victims, and bully victims. All groups were found to have mental health problems. Victims had a higher prevalence for agoraphobia, generalized anxiety, and panic disorder. Bully victims had a higher risk of depression, panic disorder, agoraphobia, and suicidality. Bullies were at a higher risk of antisocial personality disorder. Turner et al. (2013) also assessed how bullying can impact adolescent mental health. The research found that victims were at risk of elevated levels of depression and suicide ideation; verbal bullying was associated with depression; and female victims of cyber bullying had higher levels of depression than their male counterparts.

The emotional resilience of an adolescent could have influenced how severely they were affected by any mental health problems they might have experienced. By determining how resilience was promoted, research can help to decrease adolescent mental health disorders, which then decreases the amount of adult mental health disorders. However, resilience is very complex, and it means something different for each adolescent group. Factors that promoted resilience for one adolescent group will not necessarily have promoted resilience for another; therefore, determining the resilience factors for as many groups as possible is important. By increasing resilience, mental wellbeing would also increase, resulting in a better mental health during adolescence and as the individuals progress to adulthood.

Wellbeing has had no specific definition, with different schools of thought offering their own perspective of what wellbeing meant to them. Social scientists have previously viewed wellbeing as a state of mind, that can be altered and influenced by external circumstances (Clark et al., 2018). Psychological wellbeing, however, has been found to include characteristics such as: self-acceptance, autonomy, and personal growth (Ryff & Keyes, 1995). Psychologists have understood wellbeing to be associated with the individual 'flourishing', a concept explored by Shanafelt et al. (2005). Whilst these definitions differed, they all shared a similar notion of positivity for the individual. Stewart-Brown (2018) discussed wellbeing including both positive functioning and feelings. Resilience has been understood to be the dynamic relationship between stress and coping, including both the risk and protective factors involved (Stewart-Brown, 2018).

Whilst some research describes resilience as retaining good mental wellbeing following a challenge (Masten, 2001; Rutter, 2000), it may be a more complicated, dynamic construct. Resilience could provide individuals with the correct skills and strategies necessary for a specific challenge or life event (Southwick et al., 2014). However, having the skills to cope with one challenge may not mean these skills will enable the individual to cope with all the challenges they encounter (Zimmerman et al., 2013). Therefore, resilience is prone to change and fluctuate over the course of an individual's life (Padesky & Mooney, 2012). It could be argued that resilience operates on mental wellbeing by providing individuals with the skills necessary to retain good mental wellbeing, but only for that specific situation (Southwick et al., 2014). Without the adequate skills and

strategies required, the stress caused by these challenges can impact an individual's mental wellbeing (Southwick et al., 2014). These complexities, the unique nature of people, and their life experiences are what make defining resilience, and measuring it, increasingly difficult.

Therefore, mental wellbeing is not just the absence of disease or illness, it is a complex combination of a person's physical, mental, emotional, and social health factors. It is the absence of stress and the ability to thrive (Shanafelt et al., 2005). Research has explored the dual-continuum of mental health and wellbeing (Antaramian et al., 2010). The dual continuum model views mental health as separate from mental wellbeing, although the two are still strongly related (Antaramian et al., 2010). It is thought that by measuring both these aspects of an individual, a more comprehensive understanding of their health can be revealed (Lyons et al., 2013). When examining the applications of the dual-continuum model, Kelly et al. (2012) identified four groups of participants: flourishing (high wellbeing, low psychopathology), vulnerable (low wellbeing, low psychopathology), symptomatic but content (high wellbeing, high psychopathology), and troubled (low wellbeing, high psychopathology).

The word resilience originated from the latin *resilire*, meaning to leap back. Resilience has also been defined as individuals doing well, despite challenges (Masten, 2001). Benard (1995) postulated that there are four attributes to resilience: social competence, problem solving skills, autonomy, and a sense of purpose and future. Rutter (2000) argued that resilience involved an individual overcoming stress or adversity. Other researchers have defined resilience as a dynamic process that equipped the adolescent with the ability to cope with severe adversity (Rutten et al., 2013). Emotional resilience has been defined as the flexible use of emotional resources for adapting to adversity (Waugh, Fredrickson, & Taylor, 2008), linking resources to outcomes (Norris et al., 2008), and as a process that helped a person to survive adversity and disruption (Davydov et al., 2010). Windle (2011) defined resilience as the 'process of effectively negotiating, adapting to, or managing significant sources of stress or trauma'. The research suggested that resilience was a dynamic process between the individual's assets and environment that enables the individual to adapt and 'bounce back' when faced with challenges, enabling them to succeed in the face of adversity. Resilience has been thought to be an individual attribute; resilience was also

argued to be a positive developmental adaptation caused by threats to the individual's adaptation (Windle, 2011). Research has argued that resilience was made up of protective factors, processes and mechanisms that resulted in good outcomes, following adversity (Windle, 2011). Nietzsche (2009) may have coined the phrase 'what does not kill me makes me stronger' which suggested it was the event or challenge that strengthened the individuals. However, research has suggested that it was the individual's reactions that are responsible (Windle, 2011).

Adolescence might have been the first time that individuals experienced significant challenges. Whether big or small, these challenges could have tested their resilience and could have been 'practise' for bigger and more demanding challenges that came later in life. These first challenges tested their resilience to the limit and may sometimes have surpassed it, resulting in mental health problems. It is the difference between those who overcame the challenges and those whose resilience was surpassed by the difficulties that will have determined what the resilience factors were. The idea of resilience is still an emerging concept, and has not been researched extensively. However, resilience research has previously investigated why some individuals experience problems and others progress smoothly into adulthood (Werner, 2004).

Statement of the Problem

The concept of resilience is not straightforward; factors that promoted resilience for one adolescent group might not have been the same for a different group. Skrove, Romundstad, and Indredavik (2013) investigated resilience factors for depression and anxiety in adolescents who had an unhealthy lifestyle, such as: smoked, drank alcohol, tried illegal drugs, or had low levels of physical activity. The researchers found these factors to be: living with their parents, having good or very good relationships with their family, and having two or more friends. Similar research found that maternal and peer support were resilience factors for PTSD in adolescents who had reported sexual abuse (Hérbert, Lavoie, & Blais, 2014). Zimmerman et al. (2013) found that support from fathers was a resilience factor for the negative effects of depression on suicidal thoughts for adolescents. They also found that the presence of a mentor could also have been a resilience factor for adolescents, which helped youths to overcome adversity. Different groups require specific emotional resilience for that situation; what promotes resilience for bullied

LGBTQ adolescents might not have been the same as those from single parent families. By determining these factors, we can start to see the bigger picture of resilience. Resilience is more than just risk and protective factors; rather than exclusively protecting from mental health problems, resilience factors protect but also promote a good mental health.

Brief Outline of the Methodology

Quantitative measures have been used to measure resilience for key groups of adolescents, in very different situations. This might have included wellbeing measures, resilience measures, and mental health measures – if the absence of a mental health problem has been interpreted as the individual having a ‘good outcome’, implying resilience. Other measures can be used to determine the resilience factors, such as: self-belief, social support, attachment, social identity and status, and bullying experiences. Santos (2012) outlined in their review of resilience literature that quantitative measures have contributed to the current resilience research effectively, despite the fact that qualitative studies with a small sample size or case studies could have unearthed a detailed insight into resilience. In order to determine the resilience factors for different groups of adolescence, separate studies and methods have been employed for each adolescent group.

Study 1, 2, and 3: Young adolescents experienced a significant challenge when they transitioned from primary school to secondary school. In order to establish which factors promoted resilience during this challenge, participants needed to fill out measures in the last term of primary school (pre-transition) and in the first term of secondary school (post-transition). This ensured that pupils’ feelings before and after transition were documented effectively. To test the following hypotheses, the study measured: anxiety, social identity and status, wellbeing, peer interactions, and attachment:

- 1) Pupils’ anxiety will increase following transition from primary school to secondary school.
- 2) Pupils’ worries about transition will increase following transition from primary school to secondary school.
- 3) Pupils with higher levels of transition worry will also have higher levels of anxiety before and after transition.

- 4) Post-transition anxiety can be predicted by pre-transition worry and any changes in worry that occur from pre- to post-transition.
- 5) Interpersonal resilience factors, (attachment, social identity and status, (absence of) bullying, and a stable friendship network) will each be associated with, and predict the level of interpersonal worry in the process of transition from primary to secondary school.

This research explored the resilience of a group within a population, experiencing a life event. Therefore, the methodology was unique to this exploration.

Study 4: LGBTQ adolescents and bullied adolescents are both high-risk groups, so individuals in both of these groups experienced more challenges than most adolescents. In order to determine the resilience factors for this group, the following hypotheses were tested by measuring self-belief, stigma consciousness, and perceived social support:

- 1) LGBTQ adolescents, who have been bullied, will have poorer mental wellbeing compared to those who have not been bullied.
- 2) In those who are LGBTQ and have been bullied, better mental health outcomes will be linked to personal and social resilience. [Greater perceived social support, lower stigma consciousness, and higher perceived resilience].

Unlike the school transition research, this study explored the resilience of a high-risk group. Therefore, the methodology was unique to this exploration. It is important to note that these two individual pieces of research investigated unique populations, one was a group experiencing a life event together for a set amount of time and the other was a high-risk group that was targeted due to their specific characteristics. Nearly every pupil was likely to transition from one school to another, whereas bullied LGBTQ adolescents were targeted. The very nature of these two groups, where they were in adolescence, and the challenges they faced limit the comparisons that can be made between them,

Outline of the Thesis

The introduction began with a succinct background of adolescent mental health and why resilience should be explored within this population. Chapter 2 provides a literature review of the current research concerning resilience and adolescent mental health. The review includes the prevalence of mental health disorders within a variety of adolescent populations. This is followed by an overview of resilience within research, which then leads on to the different models of resilience found within the literature. Potential resilience interventions are also discussed, in line with these resilience models. The risk and protective factors regarding resilience are then discussed, again in relation to the separate adolescent groups. Chapter 3 comprises of a scoping review of school-based interventions for child anxiety and bullying. These interventions are placed into categories due to the nature of the intervention and how they are implemented to pupils. Chapters 4, 5, and 6 include reports assessing the impact of transition from primary school to secondary school in young adolescents. The first report reveals how anxiety and transition worry change over the course of school transition. The second report reveals how transition worry impacts on pupils' anxiety during school transition. The third, and final, report of this section reveals how interpersonal factors influence pupils' worry during school transition. Chapter 7 reveals the factors that influence resilience in bullied LGBTQ adolescents. Finally, Chapter 8 will present the conclusions and implications of the research, summarising the overall findings of the thesis, how these findings relate to theories previously mentioned in the thesis, and how this research contributes to current research regarding resilience in adolescent mental health.

A logic model, Figure 1, was developed to outline the overall research question: how resilience behaved and developed over the course of adolescence. Specifically, how these two opposing adolescent ages displayed the similarities and differences of resilience.

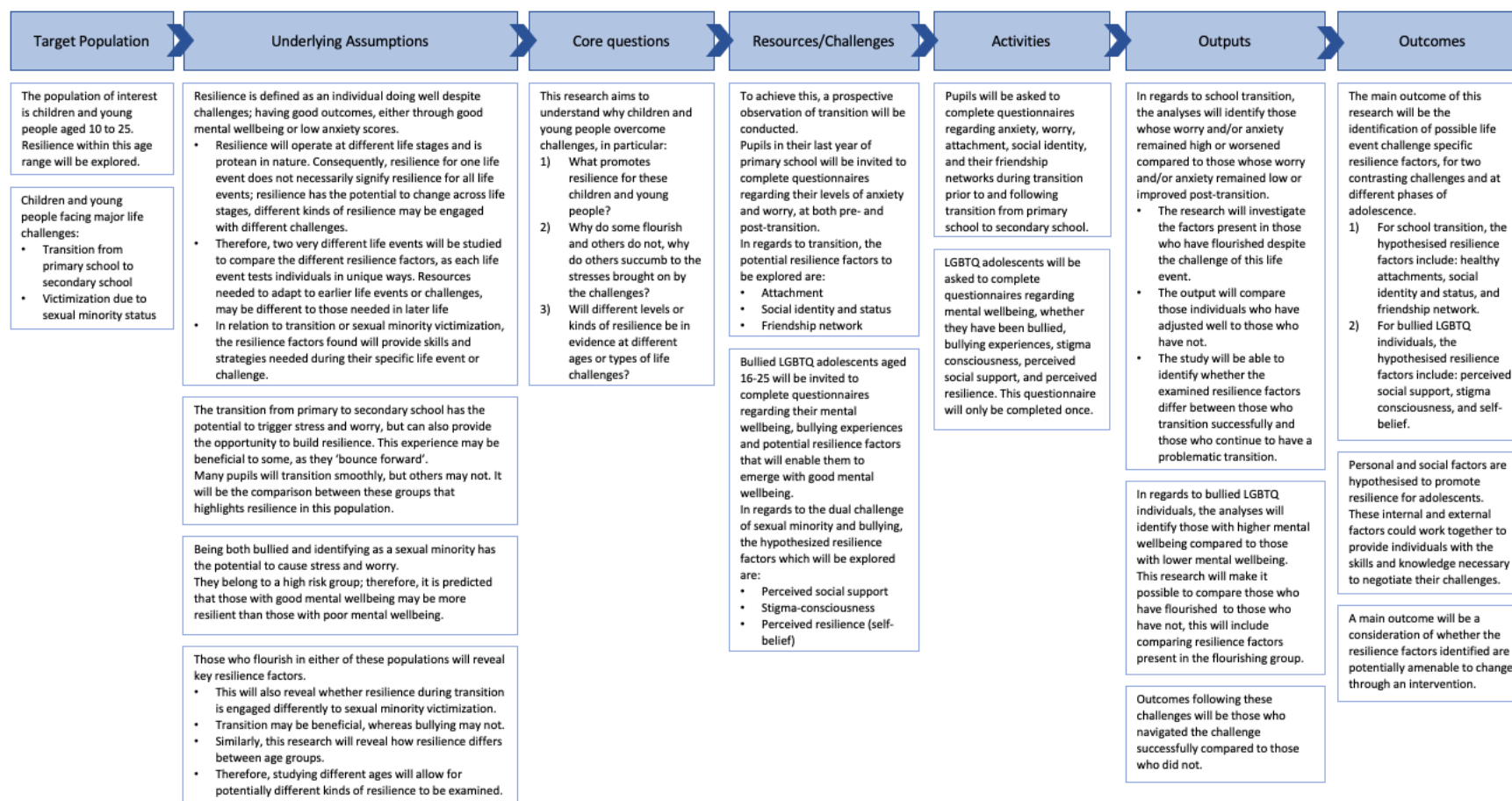


Figure 1. Logic Model of the research

Review of the Literature on Resilience in Adolescent Mental Health

Most mental health disorders will have developed during adolescence, many of which continued into adulthood (Kessler et al., 2005). Transitions, life events or being part of a high-risk group have been found as risk factors for mental health problems. Some adolescents negotiated these risks better than others, which resulted in a positive outcome. This positive negotiation has been known as resilience. Resilience could have been a key protective feature for adolescent mental health, but it has not yet been fully understood; individuals who flourish following challenges may reveal key resilience factors.

In order to develop a better understanding of resilience, the risk and protective factors associated with it should be explored. Therefore, this project will focus on one key challenge and one high-risk group to try to learn more about resilience, as resilience factors may differ between challenges. The results of this research should provide further understanding of resilience in adolescent mental health, the differences between adolescent groups and how to promote adolescent resilience.

Prevalence of Mental Health Disorders in Adolescence

When investigating resilience, the prevalence and development of mental health disorders within adolescents was a logical place to start. In order to determine what promoted or hindered adolescent mental health, first the prevalence of mental health disorders was examined. For example, researchers found that by the age of 21, 61.1% of participants aged 9-21 met criteria for a psychiatric disorder (Copeland et al., 2011). This finding was notably higher than results found by other researchers, such as Patton et al. (2014) and Cicchetti and Toth (1998), suggesting variability within these studies. Patton et al. (2014) investigated what caused mental health disorders to persist into adulthood. Using data from the Victoria Adolescent Cohort study, 1,943 adolescents were assessed for common mental health disorders at five points during adolescence and three in young adulthood, with the mean start and end ages of 15.5 and 29.1 years. The disorders assessed were: depression and anxiety – generalized anxiety disorder, social phobia, agoraphobia and panic disorder. The findings showed that 29% of the male participants and 54% female participants showed symptoms of a mental

health disorder at least once during adolescence. Nearly 60% of those participants then reported an incident again as a young adult. The number of persisting or recurrent adolescent mental health disorders was higher in girls, as was the continuity of disorders in adolescence into young adulthood. Similarly, 47% of men and 65% of women with a disorder in adolescence had at least one more episode in young adulthood.

Researchers have found that 73.9% of adults in a sample who satisfied criteria for a mental health disorder had received a mental health diagnosis before the age of 18 years and 50% had before the age of 15 (Kim-Cohen et al., 2003). Childhood disorders were generally the same as those experienced in adulthood, but there were some exceptions. For example, adult anxiety and schizophreniform disorders were preceded by a variety of childhood disorders. Overall, between 82% to 100% of participants who met criteria for a psychiatric disorder from 25 to 26 years old had experienced similar mental health problems during childhood, suggesting that most adult disorders can be reframed as extensions of adolescence disorders. Cicchetti and Toth (1998) found that 15% to 20% of adolescents experience depression and, supporting other research discussed, suggested that depression in adults had its origins in adolescence.

Kessler et al. (2005) examined age of onset and long-term prevalence for mental health disorders in 9,282 young people aged 18 years and older, with no age cut off participants included 75-year olds, using face-to-face diagnostic interviews from February 2001 to April 2003. The study assessed: panic disorder, agoraphobia without panic disorder, specific phobia, social phobia, GAD, PTSD, OCD, separation anxiety disorder, major depressive disorder, dysthymia, bipolar I and II, intermittent explosive disorder, ODD, ADHD, alcohol abuse, alcohol dependence, drug abuse, and drug dependence. The research revealed the most prevalent class of disorders to be: anxiety (28.8%), impulse control disorders (24.8%), mood disorders (20.8%), and substance abuse (14.6%). The researchers found that the lifetime prevalence estimate for any disorder was 46.4%, for two or more disorders was 27.7% and three or more was 17.3%. The investigation revealed that most prevalent life time disorders are: 16.6% major depression disorder, 13.2% alcohol abuse, 12.5% specific phobia and 12.1% social phobia. According to this research, around half of all adult Americans met the criteria for a DSM disorder at some point in their life, with onset often beginning in childhood or

adolescence. Half of all lifelong disorders started by the age of 14, and 75% of all lifelong disorders started by the age of 24. In their review of childhood anxiety, Cartwright-Hatton, McNicol, and Doubleday (2006) found evidence to suggest that the prevalence for any anxiety disorder ranged from 2.6% to 41.2%. Kessler et al. (2005) found that anxiety disorders had the earliest average onset age, whereas mood disorders had a much later average age of onset. The median age of onset for anxiety during childhood was 11 years old, with an interquartile range of six to 21 years old. The median age of onset for impulse control disorders was also 11 years old, with an interquartile range of seven to 15 years old. The median onset age for substance use disorders was 20 years old, with an interquartile range of 18 to 27 years old. In contrast, the median onset age for mood disorders was 30, with an interquartile range of 18 to 43 years old. Researchers found that 80% of respondents with a history of major depressive disorder, anxiety disorder or drug use disorder reported onset before the age of 20 years old; with ADHD, autism, separation anxiety, specific phobia and ODD having onset during childhood, and social phobia, panic disorder, substance abuse, depression, anorexia nervosa and bulimia nervosa emerging during adolescence (Costello, Foley & Angold, 2006).

This research suggested that mental health disorders were most likely to begin during adolescence. Whilst these ages of onset were revealed by the research, they may be different to when the disorders manifested, and symptoms occurred. Kessler et al. (2007) reported the age of onset for most mental disorders as either during childhood or adolescence, however individuals did not receive treatment until a few years later. This delay could be due to the difference between onset and presentation of mental disorders (Kessler et al., 2007). If the resilience factors for these disorders were identified, there would be a better grasp of how to prevent these disorders from manifesting. As evidenced by the research outlined above, mental health problems have often persisted into adulthood, which further confirms that the initial onset of these disorders needs to be prevented.

There have always been groups of adolescents that were more likely to develop mental health problems; these were classified as high-risk groups, such as: sexual minorities, victims of bullying, children from single parent families, those in care, refugees, those in prison, and so on. Identifying the resilience factors for these groups enabled interventions for these adolescents to be much more effective.

To do this, Lehmann et al. (2013) examined the prevalence of mental health disorders in 279 foster children aged six to 12 years old in Norway from September 2011, for six months. Data was collected from foster parents and teachers; child welfare services gave information about the condition of the child's care before the current placement, and the history of the child's placements. The research found that 50.9% of children met criteria for a mental health disorder. 24% met criteria for emotional disorders, 19% for ADHD and 21.5% for behavioural disorders; these were the most common. 30.4% of children met criteria for two of these three groups.

Ford et al. (2007) found that from a sample of children in care aged 5 to 17, between 45% and 49% of participants experienced psychiatric disorders. McCann et al. (1996) also found that those in care were more likely to develop mental health disorders; for a study of 134 children, 67% had psychiatric disorders compared to 15% of the comparison group of children living with their families.

Those who were victims of bullying were also seen as a high-risk group; bullied children showed more signs of worry, sadness or nightmares, and also experienced more social isolation, depression, anxiety, self-harm, and suicidal ideations than non-bullied children (Arseneault, Bowes, & Shakoor, 2010).

Fazel and Stein (2002) reviewed literature of the mental health of refugee children. The review found evidence to suggest that refugee children showed increased levels of psychological morbidity, specifically PTSD, depression and anxiety disorders. The review also argued that unaccompanied children are particularly vulnerable.

Resilience

The prevalence of mental health disorders could be linked to resilience; adolescent mental health can be influenced by factors that improve or inhibit their resilience to the stressful or adverse events that could cause mental health problems. Resilience factors provide individuals with the skills and strategies necessary for their specific challenge.

Researchers have asked why some adolescents did not experience mental health problems, especially those who were from high-risk groups. Researchers have had trouble defining these samples and although it has been a widely accepted concept, the definitions and methodologies of resilience have differed between researchers. This ambiguity has caused the measurement of resilience to be difficult and divided (Davydov et al., 2010). Generally, the definitions of resilience have referred to good mental health and developmental outcomes, despite experiencing exposure to significant adversity (Rutter, 2006).

Masten (2001) argued that resilience was common and usually came from the normative functions of human adaptable systems, claiming it emerged from ordinary processes. Masten (2001) defined resilience as a good outcome in spite of serious threats to adaptation or development. For resilience to occur, the threat must have been significant enough to challenge the individual and they must then have had a good outcome.

Olsson et al. (2003) defined resilience as good mental health, functional capacity and social competence. By reviewing literature on resilience from 1990 to 2000 for adolescents aged 12 to 18, the researchers concluded that resilience is a dynamic process, the result of the interaction between both risk and protective processes. They found that resilience was not an invulnerability to stress; but it was an ability to recover from negative events. The bigger the range of resources an individual had, the more resilient they could have been. Zimmerman et al. (2013) defined resilience as a positive development to overcome adversity, and the enhancement of promotive factors. Additionally, once the key resilience factors are determined, interventions can be designed to promote them, as outlined in the Logic Model (p28).

Resources across adolescents' lives that predicted successful adjustment for those who experienced adversity were identified as biological, psychological and social factors (Goldstein & Brooks, 2012). These researchers also interpreted resilience as the absence of mental health problems in the face of adversity or stress; that resilience and vulnerability lay at opposite ends of a spectrum. Also, some individuals appeared resilient only because they had not faced adversity. However, adolescents who had faced apparently similar risks can have different outcomes, some survived these challenges whilst others did not (Goldstein &

Brooks, 2012). Those in high risk groups will have had their resilience tested more than those not from high risk groups, those individuals may have had poor resilience but good mental health because they were not exposed to any significant risk. The researchers also thought that connections to people and interests might have been a large component of resilience, that there was a complex interaction between biological, environmental and cognitive factors. However, there were no specific risk factors connected to each adverse outcome, adding to the complexity of resilience (Goldstein & Brooks, 2012).

DuMont, Widom & Czaja (2007) examined the individual, family and neighbourhood level predictors of resilience in adolescence and young adulthood. They documented childhood physical and sexual abuse and neglect cases in 676 participants from 1967 to 1971. This research helped to describe the changes in resilience over time from adolescence to young adulthood in grown up abused and neglected children. MDD, dysthymia, GAD, PTSD, antisocial personality disorder, substance dependence and abuse were assessed. For this investigation, 48% in adolescence and nearly a third in young adulthood were deemed resilient. Resilience in adolescence was associated with being female, Caucasian, and having stable living conditions, but not in young adulthood. Stressful life events and a supportive partner seemed to promote resilience in young adulthood, suggesting that exposure to stress helps strengthen resilience as long as the stress isn't too severe, and that adequate support is available.

Resilience has been defined as the dynamic process that helped individuals adapt to severe adversity, this included both preventing poor mental health following adversity and recovery from any mental health problems caused by adversity (Rutten et al., 2013). Rutten et al. (2013) also found that resilience has been associated with secure attachment, experiencing positive emotions, and having a purpose in life; that these were important building blocks for resilience. However, as mentioned previously in the Logic Model (p28), these factors will not imply resilience for all life events.

Fergus and Zimmerman (2005) discussed three resilience models: compensatory, protective, and challenging. The researchers argued that resilience theory focused on strengths, which could have been assets or resources. Assets were defined as positive factors within the individual, such as: coping skills,

competence, and self-efficacy. Resources were defined as positive factors external to the individual, such as: parental support, adult mentoring, and community organizations. The researchers believed that both these strengths helped to overcome risk.

Compensatory model.

When a promotive factor counteracted or operated in an opposite direction to a risk factor.

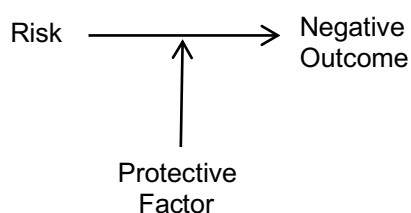


Figure 2. *The Compensatory Model of Resilience.*

Protective factor model.

When assets or resources moderated or reduced the effects of a risk on a negative outcome.

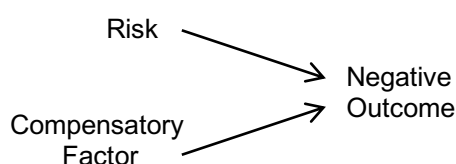


Figure 3. *The Protective Factor Model of Resilience.*

Challenge model.

Up to a point, exposure to risk helped adolescents learn how to overcome it. They had the opportunity to practice skills or employ resources. The experience must have been challenging enough to elicit a coping response, but not too severe that they were overwhelmed (Zimmerman et al., 2013). Adolescence can be seen

as a time when individuals experienced small stresses, which served as practices for greater stresses in later life.

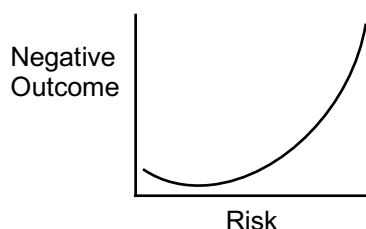


Figure 4. *The Challenge Model of Resilience.*

The compensatory model was applied by Reisner et al. (2014) and they found that family support compensated for non-suicidal self-injury and suicidality in LGBTQ adolescents. Within this model promotive factors acted as the compensatory factor, these factors compensated for risk exposure whereas protective factors attempted to modify the risk through interaction, as seen in the protective factor model (Zimmerman et al., 2013). Promotive factors were seen as assets and resources, for example the adolescent's relationship with adults could have been a resource. Tarver et al. (2004) found that having their father's support protected adolescents from the negative effects of depression. Bacikova-Sleskova, Benka and Orosova (2015) found that some factors helped to buffer the effect of stressful life events and supported good mental health, these researchers argued that resilience covers both internal and external resources as a 'conceptual umbrella'.

Prince-Embury (2014) discussed a three-factor model of personal resilience, which included: Sense of Mastery, Sense of Relatedness and Emotional Reactivity. The model focused on the personal experiences of the individual, instead of their ability or performance.

An individual's Sense of Mastery was driven by innate curiosity and predicted aspirations, motivation, and academic accomplishments. A positive expectation was associated with resilience and greater efficacy implied the individual was more likely to succeed at school. Interventions to increase resilience could focus on the individual's Sense of Mastery; cognitive behavioural strategies were used to combat feelings of hopelessness in depression try to improve self-efficacy (Prince-Embury, 2014). Another approach was 'Adventure Education',

where adolescents were exposed to new, challenging, outdoor experiences. The adolescents started to see adversities as challenges and realized that the right skills could have been learnt if they did not have them already. A Sense of Mastery could have been enhanced by thinking you could do something, the belief in yourself made a difference as to whether you could have accomplished your goal or not (Prince-Embury, 2014).

The second factor, Sense of Relatedness, focused on the adolescent's relationships. These relationships were an important protective factor for adolescent resilience; they provided the necessary support for specific situations, previous support provided the adolescent with the skills to cope with these events and the knowledge of where to get support in future (Prince-Embury, 2014). Interventions that included relationships focused on the adolescent's family to try to increase a Sense of Relatedness, improve positive communication, and promote a tolerance for others.

The third factor, Emotional Reactivity, was the speed and intensity of the adolescent's negative emotional responses; interventions aimed to protect the individuals from risk and enhanced their resilience, they did this by improving emotional regulation. When Emotional Reactivity decreased the adolescent could then use their Sense of Mastery and Sense of Relatedness more efficiently (Prince-Embury, 2014). Interventions for Emotional Reactivity focused on improving awareness, education, emotional regulation training, intentional management of Emotional Reactivity, and identifying triggers. Interventions for those with a low Sense of Mastery would focus on: improving optimism, self-efficacy, adaptability, positive expectations, problem solving skills, executive functioning, judgment, and decision making. Interventions for those with a low Sense of Relatedness would focus on: comfort with others, sense of trust, tolerance of others, social skills, ability to listen to others, ability to maintain eye contact, ability to take the role of others, and empathize with others. Interventions for those with low Emotional Reactivity would focus on: lowering sensitivity, improving recovery from emotional upset, emotional regulation, self-soothing, self-talk, relaxation, breathing exercises, and lowering emotion-related impairment (Prince-Embury, 2014).

Another model is Worsley's Resilience Doughnut (2006), which was comprised of an inner circle containing internal characteristics and an outer circle containing external contexts. There were seven external contexts: parents, skills, family and identity, education, peers, community, and money; these were environmental concepts where resilience can be ignored, recognized or developed. There were three internal characteristics: 'I am': self-esteem, 'I can': self-efficacy, and 'I have': an individual's awareness of their available resources. The external contexts helped to build internal resilience; for example: parents provided positive relationships that gave the adolescent appropriate support when necessary (Worsley, 2014).

Interventions have been used to promote resilience; such as the FRIENDS Program. The FRIENDS Program has been universal (for the whole population), selective (those at risk) and indicated (those with mild symptoms) (Barrett, Cooper, & Guajardo, 2014). The universal approach focused on reducing stigma; it was proactive, positive and administered in schools to increase resilience, to a wider population and over consecutive years. The FRIENDS Program was developed by Barrett (2012), and aimed to increase social and emotional skills, resilience and prevented mental health problems in youths, by enhancing self-esteem, self-concept, coping skills, hope, and social support; the program included a manual with CBT and positive psychological approaches and used strategies to help adolescents cope with stress and worry. The behavioural aspects focused on: exposure, relaxation training, assertiveness training, coping and problem-solving plans, and conflict resolution; the cognitive aspects focused on: teaching participants to recognize their feelings and thoughts, and the link between them, identify faulty cognitions and incompatible self-statements, and developed alternative interpretations of difficult situations (Barrett, Cooper, & Guajardo, 2014). The name FRIENDS was an acronym for the skills taught on the program, which included role-plays, group discussions, and written activities. After the introduction session the group worked through the acronym: 'Feelings, Remember to relax, Inner helpful thoughts, Explore solutions and coping plans, Now reward yourself, Do it everyday, and Stay strong inside' with one session focusing on each of the steps; there were ten weekly sessions in total. These steps helped participants to have a greater awareness and accept rather than avoid emotions, and focus on positive stimuli (Barrett, Cooper, & Guajardo, 2014).

There have been positive findings for the FRIENDS Program across different settings: Stallard et al. (2008) found that the program successfully reduced anxiety and increased self-esteem. For Essau et al. (2012) the program reduced anxiety and depression, and for Gallegos et al. (2013) the program decreased depression and increased coping skills for participants.

Another resilience intervention was the Girls Leading Outward program, a school-based leadership program designed to promote resilience for at risk girls in middle school (Stepney et al., 2014). Girls Leading Outward was a two-year intervention, which aimed to create an alternate setting in school to change negative behaviours. The program addressed aggression, problem behaviours, social skills and leadership; this included problem solving, decision-making, goal setting, emotional regulation and recognition, and assertiveness. The program worked with participants to help them make better decisions, build positive and stable relationships, and have a more positive view of themselves; the program had a community service aspect, mentoring, and praise and leadership activities (Stepney et al., 2014). These components helped to emphasize leadership, teamwork and provided a sense of self-worth and empowerment. Participants met after school and at lunchtimes for 28 weeks, the meetings covered: a welcome, building rapport, exploring leadership, communication, role plays, group work, emotions, and discussions; the first year focused on building leadership skills and the second focused on maintaining and utilizing the skills. There were five structural elements to the program: the after-school program, service learning, lunch meetings, in-school support, and undergraduate mentors. The program has been successful but there was high attrition between the years and the program clashed with other extracurricular activities. Participants in the program showed an improved self-concept and sense of mastery, also the more introverted participants showed greater positive changes (Narkus et al., 2011).

Stein (2008) reviewed research on the resilience of young people after leaving care. Their lives in care and transitions from care were also reviewed. Three main groups of care leavers were determined: 'moving on', 'survivors', and 'victims'. The 'moving on' group had successfully left care, a secure attachment and made good use of the help they were offered. The 'survivors' group had less stability and more placements than the 'moving on' group and were more likely to leave care earlier, often after a placement breakdown. Finally, the 'victims' group

had the most damaging 'pre-care' family experiences of the three groups, their care was unable to compensate for these experiences, they moved placements many times, they were likely to have emotional and behavioural difficulties, were least likely to have a redeeming relationship with a family member or carer compared to other groups and were more likely to have mental health problems than the other groups. Stein (2008) found evidence to suggest that adolescents were more likely to have a positive outcome from care if they experienced stable placements that provided a good quality of care, compared to those who had multiple placements. The research suggested that stability acted as a secure attachment, which reduced the likelihood of a placement breakdown.

As with any concept, resilience has strengths and weaknesses. Resilience is hard to define as it is not a single construct; it means something different to each group of individuals and it continues to evolve throughout adolescence. There are no set factors that define resilience, as each group experiences different challenges. Similarly, different challenges will require specific resilience factors. However, resilience is an approach that looks at the whole picture, it considers what helps and improves rather than just what the risks are. New treatments and interventions can be established from resilience research, along with effective resilience measures that have been developed. Resilience research can also determine what can help those in high-risk groups to not develop mental health problems by looking at those who are resilient; the Logic Model (p28) previously mentioned that those flourishing will reveal key resilience factors which can then inform intervention design. These weaknesses can only be addressed by more research into resilience to help cement a definition or understanding of what resilience means.

Risk and Protective Factors

An important part of resilience lies within the risk and protective factors for mental health. Wille, Bettge & Ravens-Sieberer (2008) investigated the potential risk and protective factors for children's mental health; 2,863 families with children aged 7 to 17 took part. The study investigated psychosocial risk factors and protective factors. For this study individual, familial and social resources helped to lower the chance of mental health problems, especially if the child had minimal risk factors. Also, the more available these resources were, the lower the chance of

mental health disorders for the child. Children and adolescents in this study who were exposed to moderate adversity but had strong resources available showed levels of disturbance similar to those without any exposure to risks. Protective factors were divided into three different types: personal resources, which included self-concept, perception and satisfaction with their own health, optimism and self-efficacy; familial resources, which included family climate, parental support; and social resources, which included social support and competence. Risk factors were divided into the most common risk factors, which included mental or chronic disease in one parent, growing up with a single parent or step-parent, and parental unemployment; and psychosocial risk factors, which included a chronic disease of one parent or low socioeconomic status.

However, some researchers believed there is more than just risk and protective factors that should be included, and that there were other types of positive factors than just protective ones. Tol, Song and Jordans (2013) suggested that there were different types of helpful factors; these included 'promotive factors' which predicted higher levels of positive outcomes and 'protective factors' which predicted lower levels of psychological symptoms. These factors worked together not only improving the mental wellbeing of adolescents but also decreasing the likelihood of mental health problems as both these aspects must be addressed. The greater the knowledge of these factors, and therefore resilience, the more successful the interventions would be at improving positive outcomes or preventing psychological symptoms (Tol, Song, & Jordans, 2013).

Davydov et al. (2010) similarly classified different positive factors of resilience: 'protective factors' which decreased the probability of psychological symptoms, 'harm-reduction factors' which operated when exposed to risk, and 'promotion factors' which enhanced mental wellbeing. The researchers argued that along with fight or flight, there could be a third reaction, which was different to avoiding or approaching threats. This response would be remembered within the individual's resilience system and called upon when exposed to the same specific risk or adversity. This research supported the idea that factors not only protected against poor mental health, but also promoted good mental health; and there could also have been factors that worked against specific risks to the individual's mental health. Phillips (2008) found global factors associated with resilience: a connection to adults, sense of belonging, cognitive and self-regulation skills, positive views of

the self, and motivation. Doll et al. (2011) found that high quality peer friendships, internal locus of control, the expectation to be successful, and being engaged in their schools and communities were all associated with resilience in children.

The mental health of the individual could be a risk factor, such as: any previous mental health disorder, the length of episode, and any current mental health disorder could all be risk factors for further mental health problems. Children who had previously experienced a psychiatric disorder were three times more likely to have a diagnosis at any point in the future than those with no previous disorder (Costello et al., 2003). Adolescents whose episode of mental illness was less than 6 months reported no further mental health disorder as an adult (Patton et al., 2014), suggesting that the length of episode was the strongest predictor of mental health problems during adulthood. Current physical, psychological, or developmental disorders could also have increased the chance of mental health disorders (Fazel et al., 2012). Costello et al. (2003) assessed the prevalence and development of psychiatric disorders in childhood and adolescence using data from 1,420 participants aged 9 to 13 years old who were assessed annually until they turned 16. The investigation focused on measuring depression, anxiety, conduct disorder, ODD, ADHD, and substance use disorders. When investigating whether participants would experience the same mental health disorder again at any point in the future, specific phobia was the only non-significant disorder. However, the research found that the likelihood of experiencing one disorder and then experiencing a different disorder at any point in the future was significant from depression to anxiety, and vice versa, from ADHD to ODD, and from anxiety and conduct disorder to substance abuse. If several risk factors were present simultaneously, the prevalence of mental health problems was more likely to increase (Wille, Bettge & Ravens-Sieberer, 2008).

A difference has been found between the mental health of males and females; Fazel et al. (2012) found that girls had a higher chance of mental health disorders; Costello et al. (2003) found that more girls were diagnosed with depression and anxiety disorders than boys; whereas, more boys were diagnosed with behaviour disorders than girls, and changing from experiencing one disorder to another was mostly seen in girls.

Healthy attachment relationships and good school connectedness were important for adolescents; insecure parental attachment was associated with conduct problems and emotional difficulties (Oldfield, Humphrey, & Hebron, 2015). Researchers have described school connectedness as: students' perceptions of how they were supported, respected, and involved in the school environment; their school connectedness came from how attached and committed they were to the school and how they were involved in it (Langille et al., 2015). A lower school connectedness was associated with more behavioural problems (Frey et al., 2009) and more severe emotional symptoms, such as depression and suicidal thoughts (Millings et al., 2012). Langille et al. (2015) also found that low school connectedness was a risk factor for mental health problems, particularly depression, and school connectedness acted as a protective factor for suicidal ideation. Becker and Luthar (2002) supported this research when they found evidence to suggest that a higher school connectedness predicted being able to adapt to changes positively and being able to cope well with stressful experiences. Peer attachment and social connectedness were associated with prosocial behaviour; a secure attachment to parents and peers with a higher school connectedness predicted better mental health outcomes (Oldfield, Humphrey, & Hebron, 2015).

Interactions with peers had the potential to help or hinder adolescent development, including their ability to build resilience. Not being bullied could have provided adolescents with a sense of belonging and acceptance within their peer group, a feeling of security and of where they fitted in their social environment (Gilbert, 2002). However, being bullied may have had the opposite effect on adolescents (Turner et al., 2013). Being targeted had the potential to deprive adolescents of a sense of belonging within their peers and promoted feelings of isolation and exclusion (Arseneault, Bowes, & Shakoor, 2010). These two dichotomous experiences, either being bullied or not, could have impacted on adolescents' sense of belonging and interpersonal development. Bullying could have potentially acted as a resilience factor, by a lack of bullying; or a demonstration of resilience, as the challenge that was faced. Therefore, positive peer interactions had the potential to promote adolescents' ability to build resilience, as they were provided with the external resources found in social support and attachments.

Costello et al. (2008) found that coming from families with both parents and higher connectedness were associated with a good mental health. Specific promotive factors were identified by Tol, Song and Jordans (2013) as parental support, and protective factors were identified as parental monitoring and support, and the overall quality of the home environment and family life. Luecken, Roubinov, and Tanaka (2013) also found that a supportive, cohesive family environment promoted good mental health; whereas childhood family adversity, such as a stressful, toxic childhood, was identified as a risk factor for mental health problems. Similarly, adverse family climate was found to be a negative contributor to the child's mental health (Wille, Bettge & Ravens-Sieberer, 2008). Merikangas et al. (2010) found that parental characteristics contributed to the prevalence of adolescent mental health; those whose parents were divorced or separated, and whose parents were not college graduates were more at risk of mental health disorders. Nearly two thirds of children will have experienced one form, at least, of significant adversity (Anda et al. 2006); this childhood adversity damaged the child's ability to successfully adapt to future challenges and these maladaptive responses could have led to mental health problems (Luecken, Roubinov, & Tanaka, 2013). The inability to adapt to challenges could have inferred that the adolescent's resilience was not developed correctly, due to the adversity faced during childhood. Therefore, as mentioned earlier, a supportive, cohesive family environment not only promoted good mental health, but also helped the adolescent develop resilience.

Researchers found that maternal overprotection and paternal rejection, which may have been common in single parent families, were a risk factor for anxiety (Cassidy, 1995), social phobia (Festa & Ginsburg, 2011), and panic disorder with and without agoraphobia (Someya et al. 2000). A supportive family was associated with higher resilience in adolescence; unemployed fathers were perceived as less supportive than employed fathers, therefore resilience was more likely to be lower when fathers are unemployed (Bacikova-Sleskova, Benka & Orosova, 2015).

Other family-related factors could have impacted a youth's mental health; children and adolescents who came from families with low socioeconomic status were more likely to develop mental health problems, this could have led to a cycle of mental health problems and deprivation for future generations (Reiss, 2013).

Davis et al. (2010) found that parental income and a lower parental education had a bigger influence on children's mental health than if the parent was unemployed or employed in low level jobs. Researchers found that whilst poor financial situations predicted the onset of mental health problems, it is parental education that predicted the severity and persistence (McLaughlin et al., 2011). A higher parental education was associated with better access to resources for the family, such as mental health treatment (McLaughlin et al., 2011). Researchers tried to explain different types of socioeconomic status: absolute socioeconomic status, which included parental income and education; relative socioeconomic status, which included relative deprivation and subjective social status; and community level variation, where a family lived in an area of high deprivation or income inequality (McLaughlin et al., 2012). With a lower socioeconomic status, families were less likely to have access to helpful resources. As mentioned, this created a cycle of further deprivation for future generations. As a low socioeconomic status was associated with mental health problems, the onset and severity of these increased as the family's socioeconomic status decreased, especially if they did not access the resources to help improve their mental health. This suggested that possible protective or promotive factors that improved resilience in those from low socioeconomic families should be explored, to end the cycle of further poverty and mental health problems.

Self-esteem has been associated with symptoms of depression in adolescents (Rawana & Morgan, 2014) and was an established predictor of depression (MacPhee & Andrews, 2006), but these factors had a complicated relationship (Sowislo & Orth, 2013). Some researchers have believed that that self-esteem and depression were the same construct, and that they were at opposite ends of the same spectrum (Watson et al., 2002). However, American Psychological Association (2000) found that depression could be present without a low self-esteem; and that self-esteem and depression were related to life events differently, for example: stressful events caused depressive symptoms but did not change self-esteem. Several researchers have argued that self-esteem served as a buffer for anxiety (Crocker & Park, 2004). However, the tripartite model (Clark, Watson & Mineka, 1994) states that self-esteem is linked more strongly with depression than anxiety. This is because even though both anxiety and depression were associated with high negative affectivity, low positive affectivity was linked with depression and heightened autonomic arousal was linked to anxiety.

Therefore, depression was associated with positive and negative affect, whereas anxiety was only associated with negative affect. Self-esteem was also associated with both positive and negative affect; therefore, self-esteem has more in common with depression than anxiety.

Two models that link depression and self-esteem were the vulnerability model (Beck, 1967) and the scar model (Coyne et al., 1998). The vulnerability model suggested that a low self-esteem caused depression; negative evaluations of the self were a risk factor for depression. Whereas the scar model suggested that depression caused a low self-esteem; low self-esteem was a consequence of depression, not a cause. However, these models were not mutually exclusive as both processes might have occurred simultaneously (Sowislo & Orth, 2013). The results of Sowislo and Orth (2013) supported the vulnerability model. This research suggested that a low self-esteem was a risk factor for depression. Rawana and Morgan (2014) also found that a positive self-esteem among females could prevent depression. Costello et al. (2008) identified protective factors for mental health problems as: a higher self-esteem and risk factors as: a lower self-esteem. Tol, Song and Jordans (2013) also found that self-esteem was a protective factor for mental health problems.

Previous research established an association between self-efficacy and wellbeing in working and non-working women (Sahu & Rath, 2003), undergraduate students (Siddiqui, 2015), secondary school students (Pennell et al., 2015), and stroke survivors (Maujean & Davis, 2013). Hamill (2003) argued that self-belief worked to promote wellbeing through cognitive, motivational, and emotional processes. The research postulated that by retaining their self-belief, individuals were more likely to survive adverse events. This research also argued that self-efficacy had promoted perseverance for individuals when they faced challenges (Hamill, 2003; Bandura et al., 2001). The research highlighted how important self-belief must have been for adolescent development, as they faced the challenges associated with their age group. Specifically, it was argued that self-belief was a key factor for adolescents to survive adversity, such as poverty, grief, and parental conflict (Hamill, 2003).

Similarly, humour has been used by individuals to help them cope with stress and adversity (Nezlek & Derks, 2001). Humour was experienced collectively

by individuals, and was a complex, emotional process (Vrticka, Black, & Reiss, 2013). Researchers have argued that humour was an adaptive coping strategy that took attention away from negative emotions (Samson & Gross, 2012). Several theories tried to explain the functional role humour had. The superiority theory stated that individuals found humour in other people's misfortunes because it asserted their own superiority over those experiencing hardships (Mulder & Nijholt, 2002). The tension-relief theory stated that humour was a mechanism to release tension and dispel pent up stress (Martin, 2007). The sexual selection theory suggested that humour acted as a way for individuals to assess potential partners, especially for women judging men (Vrticka, Black, & Reiss, 2013). The incongruity theory suggested that individuals found humour in things that surprised them, usually when there was a strange connection between a situation and the objects in it; this resulted in cognitive arousal (Martin, 2007). Vrticka, Black, and Reiss (2013) suggested that humour produced positive emotions; the broaden and build theory stated that positive emotions were adaptations that evolved over time and helped to build long-term resources (Fredrickson & Cohen, 2008). It was also possible that the positive emotions that came from humour resolved any negative emotions (Samson & Gross, 2012); these positive emotions provided the individual with the skills necessary to cope with adversity and stress, and defend themselves against depressive symptoms (Cohen et al., 2009). Researchers have found that humour helped to improve individuals' moods, helped them cope with experiencing stress and trauma, and helped build resilience (Vrticka, Black, & Reiss, 2013). Cohen et al. (2009) supported this by suggesting that positive emotions helped to increase resilience. Humour also helped to improve cognitive functioning (Vrticka, Black, & Reiss, 2013). Researchers have found that positive humour was better at regulating positive affect than negative humour, in fact positive humour may have been a successful form of emotional regulation (Samson & Gross, 2012).

Emotional regulation occurred when an individual was able to recognize, monitor and modify their emotional responses (Berking & Wupperman, 2012). Deficits in emotional regulation caused an individual to be unable to manage normal fear responses which increased the fear intensity, this then increased the likelihood of avoidance behaviours (Berking & Wupperman, 2012). Gross and Thompson's (2007) process model of emotional regulation stated that different forms of emotional regulation had different consequences; this was because they affected the emotional process of the emotion at different stages of the emotion

being experienced. DeSteno, Gross and Kubzansky (2013) outlined several types of emotional regulation strategies: situation selection, which involved the individual putting themselves in situations where they experienced pleasant emotions and, similarly, in situations where they avoided unpleasant emotions. Situation modification, when an individual altered the environment so that the emotions experienced from the environment improved. Both these theories helped change the situation, however it was possible to regulate emotions without changing the environment (DeSteno, Gross, & Kubzansky, 2013). Attentional deployment, which involved refocusing attention either towards or away from an emotional response, such as: distraction, worry, rumination or thought suppression (Campbell-Sills & Barlow, 2007). Cognitive change, when an individual changed how they evaluated a situation that resulted in different emotions. Finally, response modulation, which involved an individual adapting a physiological, experimental or behavioural response when experiencing an emotional response, such as: sleep (Walker, 2009) and exercise (Oaten, & Cheng, 2006).

Poor emotional regulation was associated with depression, borderline personality disorder and eating disorders (Berking & Wupperman, 2012), whereas ADHD, schizophrenia and autism included, but did not need, emotional dysregulation (Mazefsky, Pelphrey & Dahl, 2012). Emotional dysregulation was a key component to borderline personality disorder (Berking & Wupperman, 2012). Borderline personality disorder was associated with less emotional awareness and clarity, and difficulties in using cognitive re-evaluation to regulate emotions (Berking & Wupperman, 2012) and emotional dysregulation was associated with these borderline personality disorder features (Tragesser et al., 2010). Depressed individuals experienced difficulties with identifying emotions, dealing with emotions, modifying emotions, (Berking & Wupperman, 2012) and using emotional regulation strategies (Liverant et al., 2008). Individuals with Generalized Anxiety Disorder showed a decreased understanding of emotions and a more negative reaction to emotions, this included an inability to self-soothe after experiencing negative emotions, compared to those without GAD (Mennin et al., 2005). The severity of PTSD symptoms and impairment were both linked to a deficit in emotional clarity, emotional acceptance, and ability to engage in strategies for emotional regulation (Tull et al., 2007). The link between PTSD and emotional regulation was supported by evidence that improving emotional regulation skills in phase one of PTSD treatment, increased the effectiveness of phase two (Cloitre et al., 2002). Similarly,

eating disorder symptoms were impractical attempts to regulate or subdue negative emotions (Berking & Wupperman, 2012). Females with eating disorders reported more problems with emotional awareness, emotional avoidance, accepting and managing their emotions, more than those without eating disorders (Corstorphine et al., 2007). Also, those with eating disorders scored higher for difficulties in emotional regulation than those without (Berking & Wupperman, 2012).

Individuals with a fixed mindset were described as viewing intellectual abilities as qualities that could not be changed; these individuals avoided challenges if there was a possibility of failure. These individuals gave up easily and saw effort as failure because they believed that if something did not come naturally then they would not be able to do it (Dweck, 2010). However, a growth mindset viewed intelligence as something to be developed and saw challenges as opportunities to improve, rather than fail (Dweck, 2010). Yeager & Dweck (2012) found evidence to suggest that a growth mindset was associated with higher achievement across challenging school transitions. The researchers also found that when adolescents believed their social attributes could be developed and improved, this could lower their aggression and stress when being bullied. Schroder et al. (2017) found that for those with a growth mindset stressful life events were less associated with posttraumatic stress symptoms, substance abuse, depression, and reasons for non-suicidal self-injury compared to those with a fixed mindset. Researchers found that having positive role models or encouraging parents promoted a growth mindset, as these individuals encouraged children to try and face challenges instead of focusing on success or failure. These role models and encouraging parents were more likely to reward hard work, whether they did well or not (Yeager & Dweck, 2012). The implications of a growth mindset put greater value on the importance of having positive role models or encouraging parents when experiencing stressful life events.

High-risk groups have faced more adversity than other adolescents. Fazel et al. (2012) reviewed the risk and protective factors associated with the mental health of child and adolescent refugees. 44 studies were found, with 5776 participants. The mental health disorders assessed were: internalising or emotional problems, depression, anxiety, PTSD and externalising or behavioural disorders. Researchers found individual factors, such as: an exposure to violence increased

the chance of mental health disorders, the older the adolescent was the greater their chance was of developing PTSD, and the more educated the refugee was the higher their chance was of developing mental health disorders. Family factors included: an exposure to familial violence before immigration increased the chance of mental health disorders, being unaccompanied increased the chance of mental health disorders, the better the family functions and the better the parental health was the lower the chance was of mental health disorders, and the lower the socioeconomic status was the higher the chance of mental health disorders. Community factors included: the more social support a person had and the better they integrated into the community, the lower the chance was of mental health disorder. Finally, societal factors included: the greater the time was since displacement, the lower the likelihood of depression was and if post-immigration detention occurred, the likelihood of mental health disorders increases.

For those in care, protective factors were: having a 'secure base', achieving a high level of social functioning and developing a sense of permanence within their foster family; risk factors included neglect and abuse (Schofield & Beek, 2005). A common theme of protective factors for those in care was stability; this included less placements or attending the same school for longer. Other researchers found that placements with siblings, with older foster carers, more experienced foster carers with strong parenting skills, placements where foster-carers provided opportunities for children to develop intellectually and kinship placements acted as protective factors (Rock et al., 2013). The researchers found that kinship placements were more stable due to the adult caring more unconditionally than someone outside of the family would have, and they usually felt a greater sense of duty towards the child because they were related (Rock et al., 2013). Past unstable placements predicted that future placements were also unstable; this breakdown caused the child to disconnect, withdraw and detach from people especially as they lost any social groups during their placements and at school (Rock et al., 2013). Mental health problems for those in care were linked to placement instability; however, some children were still optimistic about future placements (Rock et al., 2013). Exposure to violence, serious neglect and the number of placements all increased the risk of mental health disorders. There was a higher prevalence of mental health disorders in foster children compared to the general population (Lehmann et al., 2013).

Conclusion

The majority of adult mental health problems were most likely to start in adolescence, which makes it even more important to determine how to promote good mental health during adolescence. An effective way of doing that is by defining important risk and protective factors, to find out what promotes resilience for those experiencing challenges that threaten their mental health. Unfortunately, there are no set factors that help promote resilience as it differs between groups of adolescents and the challenges they face. However, there are numerous interventions that can help strengthen resilience for certain groups, such as girls at school and anti-bullying programs; these interventions can draw on resilience research to ensure the correct resilience factors are promoted. By conducting more research into resilience, more interventions can be formulated to focus on high-risk groups and the challenges that adolescents face.

This project aims to determine the factors which are found in resilient adolescents; this will be done by investigating different groups of adolescents who are facing specific challenges that test their resilience, such as: LGBTQ adolescents, those transitioning from primary school to secondary school, and those who were bullied. By doing this, the specific resilient factors for each of these challenges could be found. By investigating individuals that flourish after surviving these challenges, key resilience factors will be revealed. These factors will then work to inform appropriate interventions for these populations.

A Scoping Review of School-Based Interventions for Child Anxiety and Bullying

Abstract

Background: Lower anxiety and less bullying experiences in young adolescents can be indicators of a successful transition from primary school to secondary school. Anxiety and bullying interventions can increase resilience in young adolescents and, therefore, enable a successful primary school to secondary school transition.

Objective: To determine the current school-based interventions for anxiety and bullying in schools. When searching for interventions to use, schools will have differing needs and resources. Therefore, this review aims to provide an overview of interventions available to combat bullying and anxiety in adolescence. This review does not aim to determine the most effective intervention, nor does it aim to recommend any specific intervention. This review works on the proviso that there is not one singular intervention that will suit every schools' needs. This is because each school will have their own idea of what they want from an intervention and the level of effort they are willing to give. Therefore, this scoping review provides information regarding the aims, structure, and reported outcomes from each of the interventions. Upon reading this review, it is the aim that schools will be provided with a comprehensive, unbiased overview of the interventions available to them in the hope that they can make informed decision of which intervention will be best suited to their specific needs.

Methods: Standard scoping review search strategies were used. Databases including Medline and PsycINFO were used to search for anxiety and bullying interventions used in schools. The studies were screened by title, then by abstract and then by paper. The selected studies were synthesised narratively, comparing the interventions.

Results: For the anxiety intervention 15 studies were included in the review, with a total of 5,118 participants ranging from 38 to 1,257. For the bullying intervention 36 studies were included in the review, with a total of 243,178 participants ranging from 38 to 150,000. These studies offered a variety of options when aiming to

reduce anxiety or bullying in schools, such as: using technology, a whole school or year-group approach, and activities; as well as similarities between successful interventions, such as CBT-based interventions and social skills training. For anxiety interventions the most common, successful strategy was to use a CBT-based intervention. Many of the interventions included a home-based component, teacher training, and activities such as: role-plays and discussions. These have been successful in reducing anxiety within schools. For the bullying interventions the most common, successful strategies used were: social skills training, computer programs, zero tolerance, increasing bystander involvement and victim support. Many of the interventions included discussions, role-plays, CBT, teacher training, and operated at a class level, school level and individual level.

Conclusions: There were many interventions available to address anxiety and bullying within schools. For anxiety, the CBT-based interventions seemed to be the most widely used. For the bullying interventions, a whole-school approach seemed to be the best option as it created an atmosphere that promoted support for victims and tolerated bullying less. Common limitations within these interventions were: small sample sizes, a loss of participants at follow-up or non-follow-up at all, and using self-report measures.

The transition process from primary school to secondary school can be helped or hindered by a variety of factors; two important aspects were how the pupil interacted with their peers and any anxieties they had regarding transition. These factors influenced young adolescents at an already potentially stressful life event. Lower anxiety and less bullying experiences in young adolescents could have been indicators of a successful transition from primary school to secondary school.

The anxiety-focused interventions have the potential to build resilience within individuals, which could then be implemented as a preparation for school transition. Similarly, the bullying-focused interventions could provide adolescence with the opportunity to build resilience in the absence of being victims of bullying. The intervention could be implemented by schools either prior to transition to reduce bullying within the transitioning year group or at secondary schools to reduce bullying within the school. It is the hope that both these types of interventions provide pupils with the opportunity to develop and improve skills they would use when distressed, hopefully providing them with the opportunity to build resilience in their school environment. Whilst these interventions may be useful for schools during transition, research discussed previously has outlined that mental health problems, such as anxiety, can emerge after transition. Therefore, schools should be aware of the resources they can employ to help combat mental health problems and build resilience for pupils throughout their school career, not just during transition.

Transition from primary school to secondary school was one of the most difficult experiences for pupils during their education (Zeedyk et al., 2003). Bullying and aggression have been found to increase with transition; Pellegrini and Long (2002) explored bullying during transition. The upheaval also happened at a time when pupils are growing and changing. As young adolescents grew, they challenged the rules set by adults as they tried to find their own identity, this challenge could have been expressed by aggression and bullying. Adolescents also experienced physical changes, a rapid increase in body size could have triggered a reorganization of social hierarchy (Pellegrini & Bartini, 2001), and this reorganization could have included bullying as a new hierarchy was established. Similarly, pupils moved from a small primary school to a much larger, and possibly less supportive, secondary school. As the groups of pupils came together from

different primary schools, social relationships were re-established which involved pupils being picked on in the competition for dominance and new social groups were formed. The pupils also went from being the largest and oldest in primary school, to the smallest and youngest in secondary school (Pellegrini & Long, 2002).

The transition was a universal experience that had the potential to influence pupils' anxiety; an increase in anxiety symptoms has previously been reported after transition (Grills-Taquechel, Norton & Ollendick, 2010). The researchers suggested that this increase was caused by the changes in their learning environments and other developmental changes that occurred during adolescence. The majority of young adolescents coped perfectly well with the changes, and any negative effects were short lived; however, for the ones that did not, a decrease in self-worth could have contributed to an increase in anxiety (Grills-Taquechel, Norton, & Ollendick, 2010). There are many differences between the two school environments, which may have intimidated pupils when they moved to secondary school. These changes included: a bigger emphasis on attainment (Benner & Graham, 2009); a more competitive environment (Demetriou, Goalen, & Rudduck, 2000); and intelligence being valued over effort (Jackson & Warin, 2000). If the young adolescents were given the tools to cope with anxiety and deal with bullying and victimization, they could have applied these strategies to any anxiety or bullying they experienced during and after transition.

Schools had a responsibility to help their pupils develop not only academically, but also socially and emotionally; they provided a sense of self-worth, positive friendships and role models, a sense of identity, motivation, empathy, and resilience (Weare & Nind, 2014). These factors could have helped pupils to have successful transitions and interventions could have ensured these developments occurred smoothly. Luckily, the promotion of mental wellbeing in schools has become more and more common (Fundacion Marcelino Botin, 2008). Many of these interventions have produced successful results in promoting mental health and wellbeing (Weare & Nind, 2014).

To ensure that adolescent mental health was promoted, school interventions needed to be effective, and there were a variety of interventions available. The skills taught to adolescents that helped against bullying and anxiety

could have been applied throughout stressful events during adolescence and beyond, which could have helped to increase resilience. A recent systematic review of school interventions by Weare and Nind (2014) concentrated on the impact these interventions had and what worked, rather than the actual interventions individually. This review focused on the type of interventions available to adolescents. There was not one definite intervention used to decrease anxiety and bullying for adolescents, which is why it was important to explore the interventions that could be employed. Anxiety and bullying interventions could have increased resilience in young adolescents and, therefore, enabled a successful primary school to secondary school transition. This review aims to identify any school-based interventions used to decrease bullying and anxiety in primary and secondary schools.

Method

The Joanna Briggs Institute Reviewers' Manual 2015 for scoping reviews (Peters et al., 2015) was used as a guideline for conducting this report.

Search Strategy

The relevant work has been identified by extensive literature searches. Only peer-reviewed literature printed in English were included and there was no restriction on the publication year. A combination of text words relating to anxiety or bullying, schools and interventions were used. Searches were done between 1995 and October 2015, to cover the last 20 years of research. A sample search strategy is provided in Appendix 1. The following sources were searched for primary studies:

Bibliographic databases.

- MEDLINE
- ERIC
- PsycINFO
- International Bibliography of the Social Sciences
- Korean Journal Database
- British Periodicals
- PsycARTICLES
- Periodicals Archive Online
- Education Research Complete

Citation database.

- Web of Science Core Collection

Indexes and abstracts.

- Library and Information Science Abstracts
- Applied Social Sciences Indexes and Abstracts
- BIOSIS Citation Index

- British Education Index
- SciELO Citation Index

Selection Criteria

Setting.

The studies included in this review must have been school-based interventions aimed at reducing anxiety or bullying for students. All types of schools were included, such as: primary, secondary, first, middle, high, community, private, and boarding schools.

Participants.

The population for these studies must have been pupils at primary, middle, secondary schools or equivalent; there was no discrimination between school structures, they could have been from any country. Therefore, the age limit was 18.

Class sizes are usually between 20-40 pupils, depending on the school, its location, and number of classes per year group. Therefore, it is the belief that these interventions would need to be applicable to at least 20 pupils, usually more, for schools to be able to apply these interventions in their classrooms. For this reason, studies with less than 20 participants were excluded for their small sample size as it cannot be verified that the intervention would be applicable and effective for larger groups of participants.

Intervention.

Some interventions used a whole school design, whereas others included just a year group. Interventions delivered in schools could be delivered by teachers or other professionals. The interventions for this review were ones aimed at decreasing anxiety or bullying, such as: CBT-based or whole school interventions; interventions were included regardless of their effectiveness.

Comparator.

There were no restrictions.

Outcome.

The outcomes from these interventions must have resulted in a significant decrease in either anxiety or bullying, which was reported in the results section of the article. The anxiety and bullying in these studies were measured by quantitative scales, observations, and interviews.

Study Design

These studies included: pre and post, quasi-experimental, cohort longitudinal, RCTs, repeated measures, and within subjects.

Study Selection

Once the searches were finished, I completed the following steps:

- Titles were screened for relevance
- Duplicates were manually removed
- Abstracts were screened for relevance
- Full article was screened for relevance

These steps have been illustrated in the flow charts below, the first for the anxiety articles and then for the bullying articles.

Data Synthesis and Analysis

The results were displayed in annotated bibliography form to summarize the interventions, first addressing anxiety interventions and then the bullying interventions. This enabled a narrative presentation of the studies, as this review will focus on the interventions. The studies were categorized into subgroups, such as: CBT-based or activity-based for the anxiety interventions and whole school, or social skills for the bullying interventions.

Anxiety Interventions

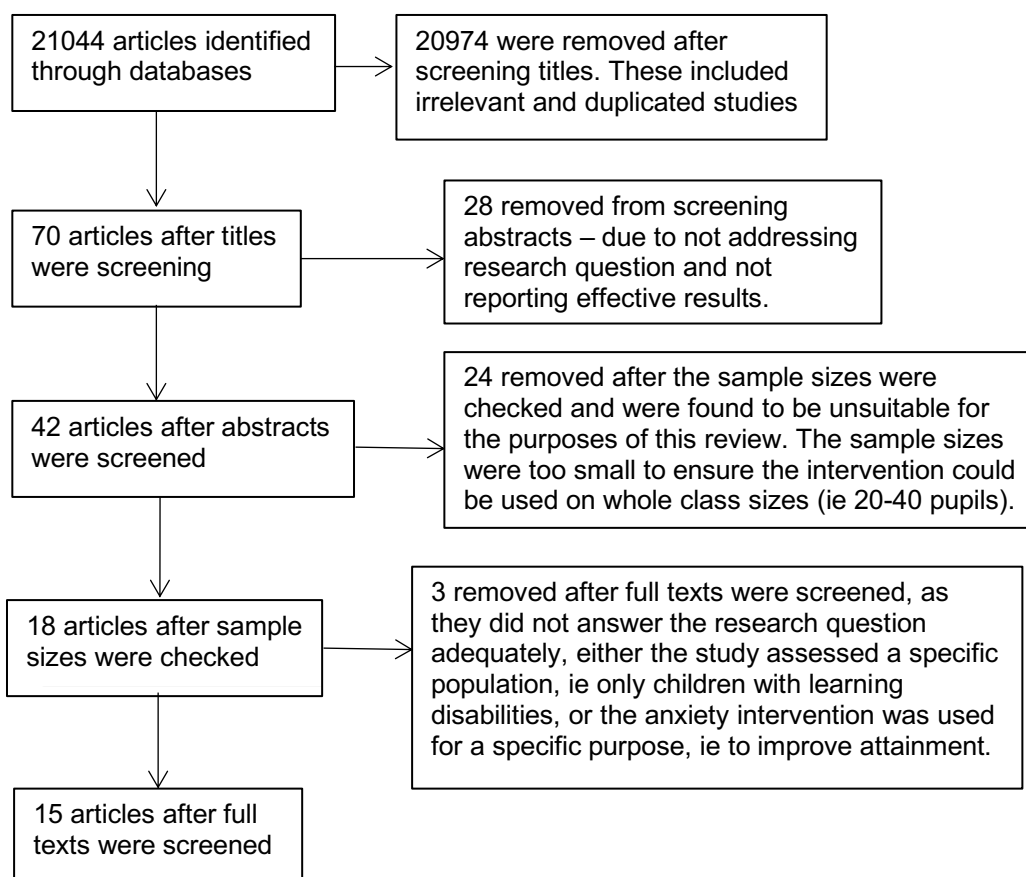


Figure 5. *The study selection for anxiety interventions.*

The PRISMA flow diagram above (Figure 5.) shows the study selection and how articles were removed during the review process, as outlined in the Methods section. There were a high number of articles found originally, however, the majority of those found, because one or two of the search items were applicable, were nothing to do with anxiety interventions in schools. For this reason, many articles were removed initially, this also included the duplicated articles; many articles that were used came up in most of the searches as they satisfied all the terms on every search. Studies were removed due to: not being relevant, being duplicates, having very small sample sizes, not answering the

research question adequately. Therefore, after starting with 70 potential articles, 15 were selected for the review.

Results

Anxiety Interventions

The search resulted in 15 studies being included for the narrative synthesis of anxiety interventions. The majority of these centred around CBT as an intervention which can be seen in Table 1.

Table 1. Characteristics of anxiety intervention studies

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Prevention of anxiety symptoms in primary school children (Barrett & Turner, 2001, Australia)	Pre and Post	10-12 (N=489)	CBT: FRIENDS	Fewer symptoms of anxiety reported at post-intervention compared to usual care (RCMAS, SCAS)	None
Effects on coping skills and anxiety of a universal school-based mental health intervention delivered in Scottish primary schools (Collins, Woolfson, & Durkin, 2013, UK)	Pre and Post	9-10 (N=317)	10 week, CBT	Significant anxiety reduction and improved coping found at post-intervention and follow up (SCAS)	6-month
Early intervention and prevention of anxiety disorders in children (Dadds et al., 1999, Australia)	Pre and Post	7-14 (N=128)	10 week, CBT	Long term, maintained decrease in anxiety. Reduced rate of existing anxiety disorders and onset of new. Evident at 2-year follow-up when Compared to control group (RCMAS)	6-month, 12 month, and 2-year
Prevention of anxiety symptoms in Children (Essau et al., 2012, Germany)	Pre and Post	9-12 (N=638)	CBT: FRIENDS	Displayed significantly fewer symptoms of anxiety at 12-month follow-up compared to the control group (RCADS, SCAS)	6-month and 12-month

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
School-based prevention of depression and anxiety symptoms in early adolescence (Gillham et al., 2006, USA)	Pre and Post	11-13 (N=44)	CBT	Significantly decreased anxiety symptoms during follow-up compared to control group (RCMAS)	6-month and 12-month
Indicated prevention of childhood anxiety and depression (Kösters et al., 2015, USA)	Quasi-experimental	8-13 (N=491)	CBT Friends For Life	A significant decrease in anxiety compared to control group at post-intervention and follow-up (RCADS)	6-month and 12-month
Evaluating the FRIENDS programme in a Scottish setting (Liddle & Macmillan, 2010, UK)	Pre and Post	8-14 (N=58)	CBT Friends For Life	Significant anxiety improvements at post-intervention and at follow-up (SCAS)	4-month for Cohort A
Comparison of an anxiety management program for children implemented at home and school (McLoone & Rapee, 2012, Australia)	Pre and Post	7-12 (N=152)	CBT: Cool Kids	Significantly decreased anxiety compared to control group at post-intervention (parent scores) (CATS, SCAS)	12-month

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
A school-based intervention program as a context for promoting socioemotional development in children (Metsäpelto, Pulkkinen, & Tolvanen, 2010, Finland)	Pre and Post	9-10 (N=240)	3-year, adding extra-curricular activities or clubs	Significantly lower anxiety symptoms than the control group over the 3-year program (No scale specified)	None
Early intervention for childhood anxiety in a school setting (Misfud & Rapee, 2005, USA)	Pre and Post	8-11 (N=91)	CBT: Cool Kids	Significantly lower anxiety compared to the control group at post-intervention and at follow-up (CATS, RCMAS, SCAS)	4-month
Effectiveness of the FRIENDS for life program in Portuguese schools (Pereira et al., 2014, Portugal)	Quasi-experimental	8-12 (N=38)	CBT Friends For Life	Significantly lowered anxiety symptoms reported by children at post-intervention (ADIS, SCARED-R)	None
A controlled evaluation of the 'FRIENDS for Life' emotional resiliency programme on overall anxiety levels, anxiety subtype levels and school adjustment (Rodgers & Dunsmuir, 2013, UK)	Pre and Post	12-13 (N=62)	CBT Friends For Life	Significant decrease in anxiety levels during the programme, continued decrease at follow-up (SCAS)	4-month

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
School intervention for promoting psychological well-being in adolescence (Ruini et al., 2009, Italy)	Pre and post	14-16 (N=227)	CBT Positive Psychology	A significant decrease in anxiety at post-intervention and at follow-up compared to control group (PWBS, RCMAS, SQ)	6-month
Positive psychology at school (Shoshani & Steinmetz, 2014, Israel)	Longitudinal repeated measures	11-14 (N=1,038)	CBT Positive Psychology	Significantly lowered anxiety symptoms throughout the intervention (2 years) and at post-intervention, compared to the control group (where they significantly increased) (BSI)	None
Classroom-based cognitive behavior therapy (FRIENDS) (Stallard et al., 2014, UK)	Three-group parallel cluster randomised controlled trial	9-10 (N=1,257)	CBT: FRIENDS	Significantly decreased anxiety for 'Health-led FRIENDS' group compared to 'School-led FRIENDS' and the control group, at follow-up for self-report measures (RCADS)	6-month and 12-month

Activity-based Interventions

Metsäpelto, Pulkkinen, and Tolvanen (2010) used a school-based intervention programme called 'The Integrated Day' in Finland, which involves restructuring the school day and adding in extracurricular activities. Multiple activities were devised from the children's feedback and recommendations, these were available at the school and to everyone. The number of clubs in the experimental schools started at 37 and rose to 139 in the third year. The 3-year, socioemotional programme obtained data from 240 pupils for both time points, from four schools, as their experimental group. The intervention successfully lowered internalizing problem behaviours for students, compared to those in the control condition. The researchers also found that the more years that a pupil participated in the activities, the lower their internalizing problem behaviours became. However, the number of different activities or attendance consistency made no significant difference. The research suggested that internalizing problem behaviours were affected by environmental influences. Limitations of this research included: a small sample size, no long-term follow-up, and even though the activities in this research were free and varied, it may not be the same if applied to schools nationally.

CBT-based Interventions

Dadds et al. (1999) conducted a group intervention that involved both child and family. One hundred and twenty-eight pupils aged 7 to 14 were selected for the intervention and control groups for the ten-week, school-based intervention. The psychosocial intervention helped children to develop their own plan for graduated exposure to their fear by using physiological, cognitive and behavioural coping strategies. The group environment helped children to learn positive approaches from each other. At the 6-month follow-up the improvements were maintained only in the intervention group; not only reducing the rate of current anxiety disorders but also preventing the onset of new disorders. The experimental and control groups results converged at the 12-month follow-up, but the difference between the two groups was clear at the 2-year follow-up. Also, the severity of the anxiety, the pupils' gender and parental anxiety levels were associated with a poor initial response. However, some limitations include: the dropout at follow-ups was due to repetitive questionnaires, which parents complained were tiresome to

complete each time. Also, there was no general measure of the child's wellbeing, which would have given a more comprehensive profile of each pupil, rather than an anxiety measure alone.

Collins, Woolfson, and Durkin (2013) investigated the effectiveness of a mental health promotion intervention in primary schools. Three hundred and seventeen pupils aged 9 to 10 years old participated in either psychologist-led, teacher-led or comparison conditions for the intervention. The intervention was conducted through 10 weekly sessions, aimed to reduce anxiety by developing and practicing coping and problem-solving strategies. Pupils in the experimental conditions showed a decrease in anxiety levels and an increase in coping skills compared to the control condition, at post-intervention and at follow-up. Interestingly, no significant difference was found between the psychologist-led and teacher-led conditions.

Gillham et al. (2006) conducted a cognitive-behavioural programme using the Penn-Resiliency Program for Children and Adolescents, with a parent intervention component. Forty-four pupils with their parents were allocated to the experimental or control condition. The cognitive-behavioural component was based on CBT and therapies for depression. The experimental condition was associated with lower anxiety and depression symptoms at follow-up, compared to the control condition. However, limitations for this study were: the sample size was small and there was little variety within the sample size. It was also not possible to determine how much of an impact the parent component had on the intervention; further research could add in another experimental condition with no parental component, in order to measure the impact of the parent component.

CBT-based Using Cool Kids

The Cool Kids programme was a cognitive-behavioural programme for the management of broad-based childhood anxiety disorders. The intervention covered education about anxiety, cognitive restructuring, gradual exposure to fear-related stimuli, assertiveness and dealing with teasing. School counsellors and mental health workers were trained to conduct the intervention; counsellors were registered psychologists and mental health workers had a varied background but were all experienced therapists. Counsellors and mental health workers were

paired up to run sessions. Pupils attended eight to ten sessions, depending on the intervention procedure, that were supported by a structured workbook which were weekly for one hour in groups of around eight pupils. Parents were invited to attend two information sessions, of two hours each. Parents were taught what the children were taught, along with parent management skills and were encouraged to use strategies to manage their own anxiety.

McLoone and Rapee (2012) investigated the effectiveness of an early intervention programme for child anxiety, based at school and at home. One hundred and fifty-two pupils aged 7-12 years old were assigned to either the experimental or waitlist control conditions. The Cool Kids programme was used, which is a 10-session cognitive-behavioural programme. Both parents and children received written summaries, worksheets and guides for home practice. After the intervention, those in the experimental group had lower levels of anxiety compared to the control group. Whilst this was a successful intervention, there were limitations. These include: attrition and parents not having the time to conduct the home-based implementations. There were also problems with parental refusal or misinformation; some parents worried that by taking part their children might become anxious, some parents argued that their child wasn't anxious or that their child would 'grow out of it'. These barriers made it difficult to ensure the parents participated, despite the parents' information evenings.

Misfud and Rapee (2005) also investigated the effectiveness of the Cool Kids programme. The intervention aimed to decrease anxiety in at risk children from low socioeconomical backgrounds. Ninety-one pupils attended a weekly, one-hour session for eight weeks. Participants were assigned to either the active or control condition for the intervention. After the intervention, the experimental condition showed a decrease in anxiety symptoms compared to the waitlist condition. The main limitation for this study was a low level of parental involvement, similar to the previous Cool Kids study discussed.

CBT-based Using FRIENDS

The FRIENDS programme was a group CBT-based programme, which taught strategies to cope with anxiety and challenging situations such as: recognizing anxiety symptoms, identifying and challenging anxious thoughts,

coping skills and self-reward. The intervention used the acronym FRIENDS: Feeling worried? Relax and feel good. Inner thoughts. Explore plans. Nice work – reward yourself. Don't forget to practice. Stay calm. Sessions administered in groups were either school-led (by a teacher) or health-led (by a trained health professional). The workshops covered risk factors, prevention, and organization.

Stallard et al. (2014) conducted an intervention through the school-year with 1,257 pupils, aged 9-10. Using the FRIENDS programme, with a control group continuing with usual school. The health-led sessions were found to be more effective than the teacher-led session in reducing childhood anxiety. Although, the intervention was effective in lowering childhood anxiety, regardless of who led the sessions, compared to the control group. Some limitations include: the study used self-report measures which could be subjective when measuring anxiety, there was little variety within the sample, and the session delivery may differ due to the absence of assessment or monitoring after training.

Essau et al. (2012) evaluated the effectiveness of the FRIENDS programme with 638 participants aged 9 to 12; 302 were placed in the experimental condition and 336 in the control. The programme consisted of 10 weekly sessions, with a follow up at six and 12 months. The programme was found to be effective in lowering anxiety and depressive symptoms, with 9 to 10 year olds improving straight away and 11 to 12 year olds improving at the follow up. This study also used self-report measures, and parent participation was low. This study also had no information on the effects of treatment regarding participants seeking treatment before the follow-ups, which could contribute to the positive outcomes rather than the programme.

Barrett and Turner (2001) also investigated the effectiveness of the FRIENDS programme. Four hundred and eighty-nine pupils aged 10 to 12 were allocated to teacher-led, psychologist-led and usual care conditions for 12 sessions. Both of the intervention groups showed a decrease in anxiety symptoms at post-intervention. This study used self-report measures as well and again parent participation was low; the majority of the parent post-intervention checklists were not returned. Also, the sessions were observed which could inflate the integrity ratings of the sessions, as therapists were aware they were being monitored.

CBT-based Friends For Life

The Friends For Life intervention used the same FRIENDS acronym and aimed to promote emotional resiliency. The FRIENDS has been customised to suit different age groups that participated in the programs; the Friends For Life program was made suitable for 8 to 11 year olds. The group CBT intervention focused on: learning, cognitive and physiological aspects, and problem-solving. There were 10 weekly sessions that each lasted an hour; that included large and small group work, workbook exercises, role plays, games, activities and quizzes.

Rodgers and Dunsmuir (2013) conducted a controlled evaluation of the Friends For Life emotional resiliency programme on overall anxiety of young adolescents. The school-based intervention involved 62 participants aged 12 to 13. The intervention was shown to lower anxiety, specifically separation anxiety; there was a significant decrease during the programme, which continued after the four-month follow-up. However, most of the participants were from a low socioeconomic background, which may have skewed the results, and the anxiety measures were self-reported rather than assessed by mental health professionals.

Pereira et al. (2014) assessed the effectiveness of the Portuguese version of the Friends For Life programme. Thirty-eight pupils aged 8 to 12 were divided into intervention and control groups. At post-intervention, anxiety was decreased for the intervention group according to the child reports, but not the parent reports. The limitations for this intervention included: a small sample size, only two schools were included and there was no follow-up.

Liddle and Macmillan (2010) also assessed the effectiveness of the Friends For Life programme in Scottish schools. Fifty-eight pupils aged 8 to 14 attended the 10-week programme. Participants were recommended by the teachers as pupils who indicated some signs of anxiety, low mood, or low self-esteem but did not necessarily meet diagnostic criteria. Similar to other interventions, the parents of the participants were invited to attend two information sessions. The intervention showed to have a positive outcome of social skills, and decreased anxiety, low mood and low self-esteem. One limitation for this research is the small sample size.

Kösters et al. (2015) also investigated the effectiveness of the Friends For Life programme. Three hundred and thirty-nine pupils were in the experimental condition and 152 were in the control, all aged between 8 and 13. The intervention group was shown to have decreased anxiety and depression compared to the control, with girls having a larger decrease than boys. A limitation of this study was the loss of response at follow-up.

CBT-based Using Positive Psychology

Shoshani and Steinmetz (2014) explored the use of a positive psychology school-based intervention, which aimed to enhance mental health. Five hundred and thirty-seven pupils aged 11 to 14 participated in the year-long programme, with 501 pupils in the control group. Teachers were trained by clinical psychologists for 15 two-hour sessions and were given a textbook with class plans. The activities included discussions, poetry and stories, movie clips, listing five or more things they were grateful for, and goal setting. The intervention lowered general distress, anxiety and depression symptoms compared to those in the control condition. Self-esteem, self-efficacy and optimism was increased for those in the experimental condition and interpersonal sensitivity symptoms were decreased. The main limitation for this study was the use of self-report measures.

Ruini et al. (2009) investigated the effectiveness of an intervention that aimed to promote psychological well-being, through six weekly sessions. Two hundred and twenty-seven participants were assigned to either the well-being intervention or the control condition, with a six-month follow-up. The experimental condition was associated with an increase in personal growth and a decrease in distress and anxiety. The intervention was successful but there were fewer sessions than other interventions and only a short follow-up, these limitations constricted the effectiveness of the intervention.

Bullying Interventions

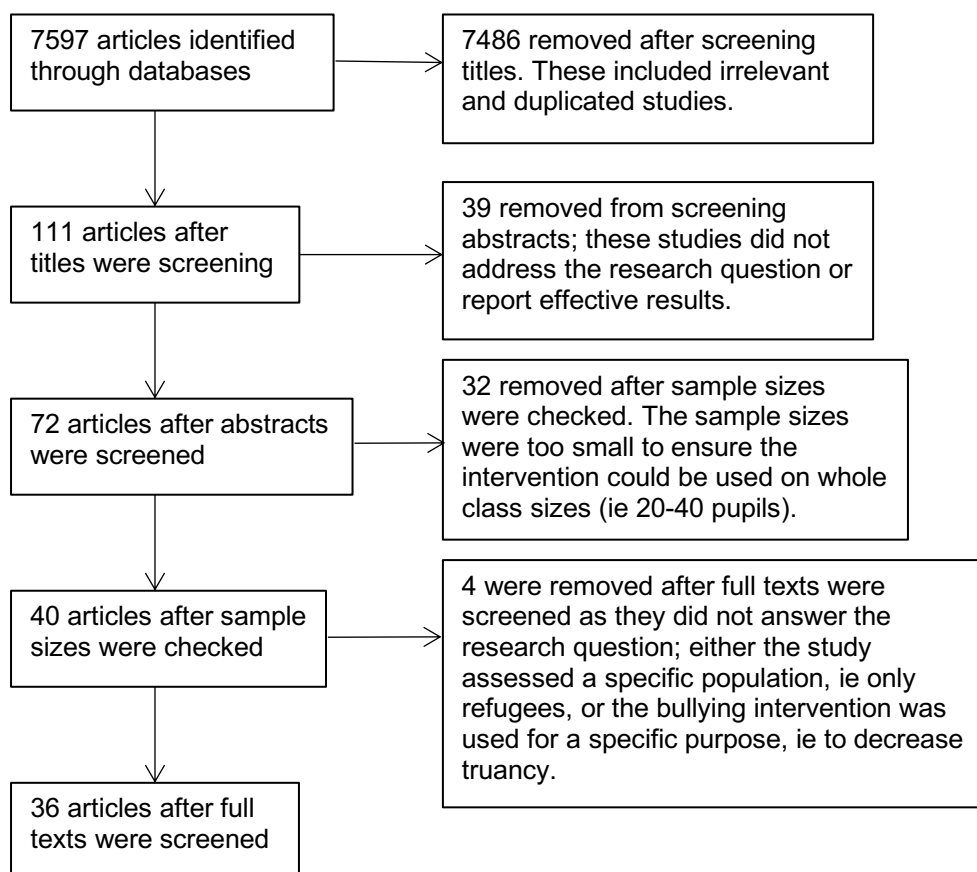


Figure 6. *The study selection for bullying interventions.*

The PRISMA flow diagram above (Figure 6.) shows how articles were removed during the review process. There were a high number of articles found originally, however the majority of these were found because one or two of the search items were applicable to these articles, even if they were nothing to do with bullying interventions in schools. For this reason, many articles were removed initially, this also included the duplicated articles; many articles that were used came up in most of the searches as they satisfied all the terms on every search. Studies were removed due to: not being relevant, being duplicates, having very small sample sizes, not answering the research question adequately. Therefore, after starting with 111 potential articles, 36 were selected for the review.

Results

Bullying Interventions

The search resulted in 36 studies being included for the narrative synthesis of bullying interventions. The majority of these focused on using social skills as an intervention, incorporating the whole schools, which can be seen in Table 2.

Table 2. Characteristics of bullying intervention studies

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
A bullying intervention system in high school (Allen, 2010, USA)	Longitudinal	14-18 (N=992)	Whole School Social Skills	Self-reported bullying decreased 50% or more, increased peer Intervention, and staff reported lower student aggression at 2-year follow-up (ROB/VQ)	2-year
Evaluating the Effectiveness of a Curriculum-based Anti-bullying Intervention Program in Greek Primary Schools (Andreou, Didaskalou, & Vlachou, 2007, Greece)	Pre and Post	9-12 (N=454)	Whole School Social Skills	Decreased outsider behaviour and increased self-report of both assertion and intervening with bullying compared to the control group (PRS, PVSBBBS)	6-month
Examining School-Based Bullying Interventions Using Multilevel Discrete Time Hazard Modeling (Ayers et al., 2012, USA)	Longitudinal	5-18 (N=1,221)	Whole School Activities	Parent-Teacher Conferences, and Loss of Privileges significantly reduced bullying and aggressive behaviours over 3 years (Disciplinary referrals)	None

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Evaluation of an Intervention Program for the Reduction of Bullying and Victimization in Schools (Baldry & Farrington, 2004, Italy)	Pre and Post	10-16 (N=239)	Social Skills Electronic Solutions	Decreased victimization for older participants (13-15 years old) compared to the control group (ROB/VQ)	None
Bully Busters Abbreviated (Bell, Raczynski, & Horne, 2010, USA)	Pre and Post	10-16 (N=488)	Whole School Social Skills	Increased teacher efficacy in reducing bullying; decreased bullying behaviours reported by teachers (PBFS, SCC, SSP-S)	None
Three-year results of the Friendly Schools whole-of-school intervention on children's bullying behaviour (Cross et al., 2011, Australia)	Longitudinal group randomized control trial	8-9 (N=1968)	Whole School Social Skills	Significantly lowered bullying observations and bullying experiences compared to control group (ROB/VQ)	None
The Friendly Schools Friendly Families programme (Cross et al., 2012, Australia)	Longitudinal group randomized control trial	5-13 (N=2,552)	Whole School Social Skills	The 'High' intervention was more effective at reducing being bullying, bullying others, and reporting bullying, compared to 'Moderate' and 'Low' interventions (ROB/VQ)	None

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Building Relationships and Combating Bullying (DeRosier, 2004, USA)	Pre and Post	7-10 (N=381)	Social Skills Activities	Significantly decreased peer dislike and bullying compared to control Group at post-intervention (SIS)	None
Prevention and Reduction of Behavioural Problems in School (Ertesvåg & Vaaland, 2007, Norway)	Cohort longitudinal design with adjacent cohorts	11-16 (N=745)	Whole School Social Skills	A significant decrease in bullying for Grades 5, 6, and 7 from pre to follow-up. A significant decrease in victims of bullying for Grades 7, 8, and 9 from pre to follow-up (BBBA)	1-year and 2-year
Reducing Playground Bullying and Supporting Beliefs (Frey et al., 2005, USA)	Pre and Post	8-12 (N=1,023)	Whole School Social Skills	Significantly decreased bullying compared to control group (SES)	None
Intervention for aggressive victims of school bullying in Hong Kong (Fung, 2012, Hong Kong)	Pre and Post	11-16 (N=269)	Social Skills Activities	Significant decrease in physical and verbal bullying at follow-up (CBCL-YSR, PVQ, RPG)	6-month and 1-year

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Tackling Acute Cases of School Bullying in the KiVa Anti-Bullying Program (Garandeau Poskiparta & Salmivalli, 2014, Finland)	Pre and Post	7-15 (N=314)	Social Skills Electronic Solutions	Significantly less bullying reported (Unspecified scale)	2-weeks
Evaluating the impact of Rtime (Hampton et al., 2010, UK)	Repeated measures	4-14 (N=149)	Whole School Activities	Fewer reports of bullying from pupils (PPSEQ)	None
Going to Scale (Kärnä et al., 2011, Finland)	Cohort longitudinal design with adjacent cohorts	8-16 (N=200,000)	Social Skills Electronic Solutions	Significantly decreased victimization from Grades 1 to 9; and decreased bullying from Grades 1 to 5 (ROB/VQ)	None
Effectiveness of the KiVa Antibullying Program (Kärnä et al., 2013, Finland)	Pre and Post	7-9 (N=6,927) 13-15 (N=16,503)	Social Skills Electronic Solutions	Decreased bullying and victimization for Grades 1 to 3 (ROB/VQ)	None
Improving the School Learning Environment to Reduce Bullying (Kyriakides et al., 2014, Cyprus and Greece)	Pre and Post	11-12 (N=1,345)	Whole School Social Skills	Significantly decreased bullying post-intervention, compared to control group (ROB/VQ)	None

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Evaluation of Bully-Proofing Your School as an Elementary School Antibullying Intervention (Menard & Grotpeter, 2014, USA)	Pre and Post	8-11 (N=3,497)	Zero Tolerance	Significantly decreased bullying and aggression, and increased school safety compared to the control group (BPYSOM)	1-year
Enhancing Children's Responsibility to Take Action Against Bullying (Menesini et al., 2003, Italy)	Within Subjects	11-14 (N=293)	Social Skills Activities	Prevented bullying from increasing, as it did in the control group (PRB/VR, PVS)	None
Decreasing Bullying Behaviors in Middle School (Nese et al., 2014, USA)	Pre and Post	11-14 (N=1,710)	Whole School Social Skills	Reduced verbal and physical aggression (Observation)	None
Reducing Adolescents' Involvement With Relational Aggression (Nixon & Werner, 2010, USA)	Pre and Post	11-12 (N=406)	Social Skills Activities	Significant reductions in aggression and victimization at post-intervention (AA)	None
Bully/Victim problems in school (Olweus, 1997, Norway)	Cohort longitudinal	11-14 (N=2,500)	Zero Tolerance	Significant decrease in bullying and anti-Social behaviours (ROB/VQ)	Yes but not specified

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Evaluation of the Effectiveness of an Anti-Bullying Programme in Primary Schools (O'Moore & Minton, 2005, Ireland)	Pre and Post	5-12 (N=520)	Zero Tolerance	Significant decrease in pupils' reports of being bullied, and of bullying others at post-intervention (ROB/VQ)	None
The Zero programme against bullying (Roland et al., 2010, Norway)	Pre and Post	7-12 (N=20,446)	Zero Tolerance	A significant decrease in bullying at post-intervention (Unspecified scales)	None
An investigation into the efficiency of empathy training program on preventing bullying in primary schools (Şahin 2012, Turkey)	Pre and Post	11-12 (N=38)	Social Skills Activities	Bullying decreased and empathic skills increased significantly, compared to the control group (SIB/C)	2-month
Peer-led intervention campaign against school bullying (Salmivalli, 2001, Finland)	Pre and Post	13-15 (N=196)	Whole School Activities	Decreased bullying in girls; increased pro-bullying attitudes in boys at post-intervention (Unspecified scales)	None
Anti-bullying intervention (Salmivalli, Kaukiainen, & Voeten, 2005, Finland)	Cohort longitudinal with adjacent Cohorts	9-12 (N=1,220)	Whole School Social Skills	Significantly decreased bullying for Grade 4 pupils at follow-up (PRQ)	1-year

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Virtual learning intervention to reduce bullying victimization in primary school (Sapouna et al., 2010, UK and Germany)	Controlled trial	7-11 (N=1,129)	Social Skills Electronic Solutions	Decreased bullying compared to control group at follow-up (OB/VQ)	1-week and 4-week
The PEACE Pack (Slee & Mohyla, 2007, Australia)	Pre and Post	5-13 (N=954)	Whole School Social Skills	Significantly decreased bullying at post-intervention (EB)	None
Bullying in Flemish schools (Stevens, Bourdeaudhuij, & Van Oost, 2000, Finland)	Pre and Post	10-16 (N=1,104)	Whole School Social Skills	Decreased bullying in primary schools compared to secondary schools and the control group (BI)	1-year
The effects of an anti-bullying intervention programme on peers' attitudes and behaviour (Stevens, Van Oost, & De Bourdeaudhuij, 2000, Finland)	Pre and Post	10-12 (N=728) 13-16 (N=1,465)	Social Skills Electronic Solutions	Significant decrease in bullying, short term (BI)	1-year
"FearNot!": a computer-based anti-bullying-programme designed to foster peer intervention (Vannini et al., 2011, UK and Germany)	Pre and Post	7-11 (N=1,186)	Social Skills Electronic Solutions	Increased defenders in German sample (BAI)	5-week

Study (Authors, year, country)	Study Design	Participant Age	Intervention	Outcome (Measures)	Follow-up
Inter-cultural differences in response to a computer based anti-bullying intervention (Watson et al., 2010, UK and Germany)	Pre and Post	7-11 (N=908)	Social Skills Electronic Solutions	Improved coping strategy knowledge in German sample (KAB, CSK)	5-week
Effects of the KiVa Antibullying Program on Cyberbullying and Cybervictimization Frequency Among Finnish Youth (Williford et al., 2013, Finland)	Group RCT	10-16 (N=18,412)	Social Skills Electronic Solutions	Decreased cyber-bullying at post-intervention compared to control condition (OB/VQ)	6-month
Social Influence and Bullying Behavior (Wölfer & Scheithauer, 2014, Germany)	Pre and Post	13-16 (N=328)	Social Skills Electronic Solutions	Significantly decreased bullying post-intervention compared to control group (ROB/VQ)	None
High School Anti-Bullying Interventions (Wurf, 2012, Hong Kong)	Pre and Post	11-12 (N=545)	Whole School Social Skills	Whole School approach significantly decreased bullying at post-intervention compared to other conditions and control group (B/VP)	7-month
Intervention research on school bullying in primary schools (Yucui, Shuqiong, & Wenxin, 2009, China)	Pre and Post	8-11 (N=354)	Whole School Social Skills	Significantly decreased bullying, a greater decrease was found for Grade 3 than Grade 5 (OB/VQ)	None

Social Skills: Activities

Şahin (2012) investigated the effectiveness of empathy training to reduce bullying. The intervention focused on pupils in primary schools that tended to display bullying behaviours. Thirty-eight pupils were selected for empathy training, for 11 weeks. The intervention focused on improving the bully's cognitive skills by recognizing, evaluating, and naming feelings. Role-plays, modelling techniques, social promotion, giving responsibility, sensitive support, and home tasks were also used. The intervention resulted in a decrease in bullying behaviours and an increase in empathy skills for the experimental group, compared to the control group. However, a limitation for this research included a small sample size, due to the participants being those who specifically exhibit bullying behaviours. Another was the use of self-report measures, which will not have been as accurate as interviews delivered by a mental health professional. Each participant reported on their own opinion of what defined bullying, which can vary from participant to participant. This can cause discrepancies between participants' responses.

DeRosier (2004) conducted a social skills intervention to target peer dislike, bullying or social anxiety called Social Skills Group Intervention. Three hundred and eighty-one students were divided into experimental and control groups for the intervention, which focused on children who had significant peer relationship difficulties. The intervention improved peer liking, self-esteem, and self-efficacy and decreased social anxiety for the experimental group, compared to the control group. This intervention benefitted aggressive children, those in the experimental group showed a decrease in aggression, bullying behaviour, and antisocial affiliations, compared to controls. Limitations within this research were: more sources of information were needed, rather than just peer and self-report; and there was no follow-up for this research, so the long-term effects are unknown.

Menesini et al., (2003) conducted an intervention designed to enhance children's capacity to offer support to victims of bullying, increase bystander involvement and improve peer relationships. This was done with a peer support model, which involved 178 experimental and 115 control participants aged 11 to 14. The class intervention involved increasing awareness of pro-social and helping behaviours and creating a more positive attitude towards others. Three to four peer 'supporters' were selected for each class who were trained to enhance these skills

and attitudes. The supporters then worked in class, this began with a class discussion, contact with targeted children, supporters being assigned to specific children, and teacher-supporter frequent supervisions. These supporters then helped to train the rest of the class. This intervention had a positive effect on the experimental group, managed to prevent the increase of negative behaviours and attitudes compared to the control group. The limitations within this study were the absence of a follow-up and that only two schools were involved. These limitations meant that the effectiveness of the intervention could not be measured over a long period of time, or tell us how well the results apply to the whole school population.

Fung (2012) conducted an intervention aimed at aggressive victims using cognitive-behavioural group therapy, in particular: cognitive distortions, emotional skills, deficits and behavioural regulation impairments. Sixty-eight participants attended ten sessions, which consisted of: cognitive restructuring, emotional and anger management, emotion recognition, rebuilding coping repertoires, enhancing teacher-peer relations, and improving social adjustment skills. The intervention decreased aggressive victims' anxious and depressed emotions. Limitations of this study were: a small sample size and only 39 of the 68 completed the follow up, the study also did not have a control group.

Nixon and Werner (2010) evaluated the effectiveness of the Creating a Safe School programme, the intervention was designed to decrease relational aggression and relational victimization in 10 to 12 classroom sessions. Participants were 406 students with an average age of 11. The intervention involved role-plays, storytelling, and small group facilitation. The CASS has three aspects: raising awareness and knowledge of relational aggression, increasing empathy, and challenging current beliefs of relational aggression. The intervention was successful in decreasing relational aggression and victimization, for students who initially reported high levels. However, this investigation had no control group, there was no follow-up, and only 11-year olds are assessed.

Social Skills: Electronic Solutions

The 'Fear Not' program was a computer-based anti-bullying program, a virtual learning strategy to increase coping skills for victims and increase empathy and defence of victims by bystanders. This three-week intervention focused on the

defender role. The virtual intervention took place in a primary school environment with virtual characters: bully, victim, bully assistants, defenders of victims and bystanders. Bullying occurred and was observed by participants. Between episodes, participants took part by counselling the victims and they saw how their advice can help a situation.

Vannini et al. (2011) used the 'Fear Not' program in German and UK primary schools for three weeks, with 1,133 pupils aged 7 to 11 divided into experimental and control groups. The program helped non-involved children to become defenders in the German subsample, but not in the UK. Watson et al. (2010) found that the 'Fear Not' program improved the UK sample's coping strategy knowledge scores, and that the German sample improved over time. Sapouna et al. (2010) found that the 'Fear Not' program successfully lowered rates of victimization and increased the chances of pupils escaping victimization at the first follow-up. Short term effects were found on escaping victimization, and a short-term effect on overall prevention of bullying for UK children. No negative side effects were found from using the intervention. Limitations for the 'Fear Not' program were: a short follow-up, the intervention was only three weeks long, and self-report measures were used.

The KiVa program was an anti-bullying computer program and was divided into the 7 to 9 year olds' version and the 13 to 15 year olds' version. The 7 to 9 year olds' version involved 10 sessions designed to raise awareness of the role that the group plays in maintaining bullying, increased empathy, and promote strategies to support the victim. The virtual environment included five levels and corresponded to what was covered in the sessions. Students learnt and tested their knowledge of bullying and learnt new skills of how to act in bullying situations. The lessons involved discussions, group work, role-play exercises, and short films about bullying. The 13 to 15 year olds' version involves 13 to 23 lessons or 'theme days'. The virtual environment was called KiVa Street, an internet forum where students signed in and visited places, such as the library to find out information about bullying or the movie theatre to watch a short film about bullying. The intervention aimed to provide pupils with knowledge, skills and motivation to change their behaviour towards bullying. At break times, staff wore bright green vests to signal that bullying was taken very seriously in school. The school also received presentation materials to introduce the programme to pupils and parents;

parents also received a guide about bullying and advice about prevention and reduction.

Kärnä et al. (2013) investigated the effectiveness of the KiVa program with 6,927 participants aged 7 to 9 years and 16,503 participants aged 13 to 15 years. The program was effective in reducing bullying and victimization, more so in the younger group. Williford et al. (2013) found the KiVa program to be a significant intervention on decreasing cybervictimization. However, the intervention was not significant for children over 12 years old. Kärnä et al. (2011) investigated the use of the KiVa program for 8 to 16 year olds. The researchers found that the intervention was effective in reducing victimization and bullying. Garandeanu, Poskiparta and Salmivalli (2014) used the KiVa program to compare the Confronting Approach to the Non-Confronting Approach. The results showed that the Confronting Approach was effective for 11 to 15 year olds, but not for 7 to 10 year olds, and was better for short-term victimization but not for long term. The KiVa program had certain limitations, such as: a limited follow-up, a limited amount of measures on bullying and victimization, self-reports were used but students may be reluctant to be truthful as teachers were involved in the program, and the teachers also may not have been able to recognize all types of bullying.

Baldry and Farrington (2004) conducted an intervention to reduce bullying and victimization in schools for 239 pupils aged 10 to 16, who were divided into experimental and control conditions. The professional-led intervention involved three videos, with sections in a booklet corresponding to each video. These videos focused on bullying and violence, and tried to help students to develop their social cognitive competence skills and understand the negative consequences of aggressive behaviour. This intervention was found to work best for older students, who showed a decrease in victimization compared to an increase for the control group. However, this study had no follow-up, so it was not clear if the intervention continued to work for the older students or if there was a delayed effect for the younger students.

Wölfer and Scheithauer (2014) investigated the efficacy of the fairplayer manual intervention aimed to prevent bullying from a social network perspective, with 328 middle school students. The school-based intervention focused on cognitive-behavioural methods, raising awareness, different roles within the

bullying process, role plays, addressing social norms and increasing social competencies, such as: empathy, moral reasoning and perspective taking skills. The intervention successfully lowered the bullies' social influence, addressed individual skills and social mechanisms. However, there were no follow-ups and the data used self-report measures.

Stevens, Van Oost and De Bourdeaudhuij (2000) conducted an anti-bullying programme on peers' attitudes towards bullying and their attempts to solve bullying and victimization conflicts. The intervention was curriculum based with four sessions led by teachers, with 728 primary school pupils aged 10 to 12 and 1,465 secondary school pupils aged 13 to 16. The programme was based on social cognition, using aspects such as: cognitive perspective taking, problem-solving strategies and social skills training. This included: videos, group discussions, clear class rules such as zero tolerance, peers were asked to tackle bullying, and victimization problems. Participants received specific training on peer solutions, modelling techniques and role-play; afterwards participants gave intense feedback. The primary schools displayed significant differences at post-test, there was a small decline in seeking teachers help and increased the likelihood of students supporting peers. The secondary schools had a positive outcome at post-test with an increase in bystander help, although these disappeared at the second post-test follow up.

Whole School: Activities

Hampton et al. (2010) evaluated the impact of the Rtime intervention, a 15-minute, weekly structured relationship programme which aimed to decrease bullying behaviours and improve enjoyment. Rtime was designed as a 30-week, whole school intervention; this study included 149 students. Rtime was made up for five parts: random pairing, greeting, activity, plenary and conclusion – children worked in random pairs on a co-operative activity, incorporating time to greet and thank each other. Rtime was shown to make a positive impact on children's development of relationships and friendships; the intervention contributed to some changes in the children's perceptions of bullying and school enjoyment. Teachers reported that the intervention impacted on collaborative working, manners and general social skills, and promoted significant positive changes in classrooms. However, this study did not have a follow-up so long-lasting effects cannot be

determined.

Ayers et al. (2012) examined a school-based disciplinary intervention by using data from the School-Wide Information System. Participants were 1,221 students who had received an office disciplinary referral for bullying during the first term of school. Interventions included: detention, in-school suspension, loss of privileges, out of school suspension, parent contact, parent-teacher conferences and time in the office. Only the parent-teacher conferences and loss of privileges were significant in reducing the rate of bullying and aggressive behaviours. However, teacher reports were used, therefore many episodes of bullying may have gone unnoticed; the intervention was not aimed at specific bullying behaviours; the interventions themselves were at the school's discretion, the content of parent-teacher conferences could vary from school to school and the loss of privileges could be any privileges depending on the school.

Salmivalli (2001) conducted a peer-led intervention that targets bullying, the school participated in a week of events and activities, with 196 participants. Eight peer counsellors were chosen by fellow students and attended training sessions. Five core events took place in 'Happy Face Week': an introductory assembly about the intervention and bullying with short, dramatic excerpts from the drama club; peer-led discussions in class with three peer counsellors assigned to each class; bullying featuring in the School News; posters; and a competition to complete an open-ended comic strip describing a bullying situation and finding a solution. The findings implied that the intervention was effective in decreasing self-reported bullying, post-intervention. The intervention was found to be effective in girls more than boys, with decreases in self- and peer-reported bullying and power attitudes. In boys there was a slight decrease in self-reported bullying but an increase in pro-bullying attitudes. However, this intervention was only a week long, there were no follow-ups and no control group for comparison.

Whole School: Social Skills, Teacher Training, Curriculum-based

Allen (2010) assessed a whole-school intervention designed to decrease bullying, victimization and aggression. Nine hundred and ninety-two students, aged 14 to 18, participated in a two-year, whole-school intervention. The intervention involved a social support system: a bullying report form, a follow-up form which

listed steps to resolve the problem, the intervention team which received information on the problems and coached the staff, and a list of responses for intervening in bullying and possible alternatives. The intervention also included videos, interactive assemblies, discussions in class, and presentations of the social support system to students and parents. Self-reported bullying decreased by at least 50%, reported intervening increased, and staff reported a decrease in student aggression. However, there was no control group to compare to, attrition at follow-up was 35%, and the area the intervention conducted was wealthier than a lot of areas which challenges how applicable the results are nationally.

Salmivalli, Kaukiainen and Voeten (2005) conducted an intervention which targeted the school as a whole to decrease bullying. One thousand, two hundred and twenty students aged 9 to 11 participated in the intervention, and teachers attended a one-year training course. The intervention had three levels: class, school and individual student levels; with the class level being the most used. Teachers discussed bullying with the class, raised awareness of bullying, encouraged self-reflection, and encouraged a commitment to anti-bullying behaviours. The school employed a whole school policy against bullying, with guidelines. The students participated in individual discussions, shared concern, and a no blame approach. The intervention had a positive impact on: the frequency of bullies and victims, observations and experiences of bullying, attitudes and efficacy of beliefs, and participant role behaviours. Some limitations included: no control group, the intervention programme was vague – teachers adapted the training themselves with no observations, it was also unclear how much support the teachers had.

Bell, Raczynski and Horne (2010) evaluated the efficacy of an abbreviated version of the Bully Busters programme, a psychoeducationally-based group intervention. Teachers attended 7 group sessions where they were shown the intervention model, active learning, role plays, cognitive and emotional processing. The materials and experiences were then applied to the classrooms with students. Fifty-two teachers and 488 students participated in the school-wide, year-long intervention. The programme improved teachers' knowledge and use of intervention skills and increased teacher self-efficacy. However, there was no control group, there were unequal sample sizes at pre and post-test, some

teachers were voluntary, and some were not – which impacted how invested they were in the intervention, there were no observations or check-ups by professionals.

Stevens, Bourdeaudhuij, and Van Oost (2000) conducted a school-based, anti-bullying intervention. One thousand, one hundred and four students, aged 10 to 16, were allocated to treatment with support, treatment without support or control. The intervention included activities for: individual students involved in bullying or victimization problems, parents and teachers, the peer group. The intervention involved videos, an anti-bullying policy, zero tolerance, and curriculum-based activities such as: cognitive perspective taking, clear class rules, problem solving strategies to improve knowledge, social skills training to help students to intervene. There were also active teaching methods, like modelling techniques, role-plays, classroom activities, and booster sessions. The 'with support' condition also had specific training for staff in communication techniques, emotional and behavioural support, and intense training. For the primary schools, there was a decrease in bullying in both treatment groups, with no significant difference between the two. However, there were no outcomes for the secondary schools. A limitation for this study was the loss of participants at follow up.

Nese et al. (2014) assessed the effectiveness of the expect respect intervention in three schools, with 1,710 students. Students were taught to distinguish between respectful and disrespectful behaviour by attending three lessons of one hour over six months. Participants learnt how to signal 'stop!', how to follow a stopping routine, appropriate bystander behaviour, and how to recruit adult support. The intervention effectively reduced verbal and physical aggression; however, there was no control group, the intervention was brief, and there was no follow-up. Ertesvåg and Vaaland (2007) also evaluated the respect programme, with 745 students from three primary schools and one secondary school, aged 11 to 13 and 14 to 16. The intervention used the authoritative approach with adults as a source of consistent authority. The programme is broad based, targeting several types of behaviour. Teachers attended four 1-day seminars, and intervention strategies included: classroom leadership, a whole-school approach, careful timing and full commitment. The intervention resulted in a decrease in problem behaviours.

Andreou, Didaskalou and Vlachou (2007) evaluated the effectiveness of a bullying intervention, set on curricular activities designed to: raise awareness, self-reflection and problem solving in regard to bullying. The intervention lasted four weeks, with 454 students divided into the experimental and control conditions. The intervention was implemented by teachers, who had received training, and involved small groups and whole class discussions. The intervention successfully decreased outside behaviour and increased students' self-efficacy beliefs for both assertion and intervening in bully and victim incidents. However, the intervention was brief and long-term effectiveness was limited.

Wurf (2012) conducted a whole-school, anti-bullying intervention in secondary schools. Five hundred and forty-five students were allocated to whole schools, curriculum with shared concern for Year 7, shared concern for Year 7, or control conditions. The intervention included: discussions, role-plays, literature and videos. The shared concern aspect involved a five-phase model to conflict resolution: individual talks, support offered, one-to-one meeting, a summit meeting of all involved, and a follow-up. The whole school approach was found to be the most effective at reducing bullying. However, this intervention had no long-term follow-up, and may not be specific enough to treat or measure all types of bullying.

Kyriakides et al. (2014) assessed the effectiveness of a whole-school, anti-bullying intervention in 52 schools, which were divided into experimental and control conditions for 8 months. The intervention involved training and guidelines, feedback to the school and action plans; information was given to the schools to help them develop strategies to decrease bullying. The experimental group was successful in decreasing bullying. However, this study had no follow-up, and the effort put in by the schools was unregulated.

Yucui, Shuqiong, and Wenxin (2009) conducted a 5-week, anti-bullying intervention with 354 students. The intervention involved teacher training; at the class level the intervention used the planning-action-observation-reflection model. The model consisted of planning the questions and duration of the intervention; the action of class meetings, parent meetings, role-plays, politeness training and self-confidence training. Then the participants took part in observation and reflection of these aspects of the intervention. The intervention lowered bullying, increased the pupils' sense of security in school and the teachers' awareness and problem-

solving ability. However, there was no follow-up in with this study and it was a group intervention rather than an individual intervention.

Frey et al. (2005) conducted an intervention designed to decrease playground bullying, the Steps to Respect programme. Participants were 1,203 primary school pupils. The intervention involved adult factors, teacher training, promoting prosocial beliefs, socio-emotional learning through classroom curriculum, observations of bullying, bystander and adult behaviour, and coded behaviour. The intervention successfully decreased bullying and argumentative behaviour in the intervention group, compared to the control group. The intervention increased agreeable interactions and decreased destructive bystander behaviour, increased responsibility and perceived adult responsiveness and decreased acceptance of bullying and aggression when compared to the control group. However, there was no follow-up, self-report measures were used, and not all bullying behaviours were measured.

Cross et al. (2012) evaluated the effectiveness of the Friendly Schools Friendly Families programme in reducing bullying. Participants were 2,552 pupils aged 5 to 13, for three years. Participants were allocated to either the high or moderate intervention or control groups. The intervention had whole school, classroom, family and individual levels. The whole school aspect aimed to create a positive school climate, promote connectedness, provide policies and practices to prevent and reduce bullying, increase school support using resources and skills. The classroom aspect involved activities, role-playing, stories, role modelling, skills training and observational learning. The family level involved working with parents in building awareness, attitudes and self-efficacy. Finally, the individual level involved selected activities to support victims and help modify the behaviour of bullies. The high intervention group was found to be the most effective at decreasing bullying. However, the intervention used self-report measures and had high levels of attrition at follow up. Cross et al. (2011) also conducted the Friendly Schools programme, with 1,968 participants aged 8 to 9. The researchers found the intervention decreased bullying and increased the likelihood of people reporting bullying. However, this study had high levels of attrition at the follow-up and used self-report measures.

Slee and Mohyla (2007) conducted the PEACE Pack intervention to reduce bullying. Participants were 954 students aged 5 to 13. The PEACE acronym stands for Preparation, Education, Action, Coping and Evaluation. The Preparation for the PEACE Pack involved surveys and interviews. For the Education aspect schools were given feedback and helped to make anti-bullying policies. The Action aspect included integrating the anti-bullying policy with other school policies and developing lesson plans. The Coping aspect included launching the policy and lesson plans. For the Evaluation a second survey was conducted. The intervention was effective in reducing bullying. However, there was no long-term follow up to determine if the effects are long lasting.

Whole School: Zero Tolerance

Olweus (1997) evaluated the effectiveness of a zero tolerance, school based, anti-bullying intervention, which focused on restructuring the social environment. Forty-two schools, around 2,500 participants, took part in the intervention for 2 years; the students were between 11 and 14 years old. The intervention emphasized behaviours and attitudes characterized by a combination of positive involvement from teachers and parents, firm limits for unacceptable behaviour – zero tolerance – and the consistent use of non-hostile consequences on rule breaking. The adults at home and school were advised to act consistently. The intervention was found to decrease bullying by 50% to 70%, and vandalism, theft, drunkenness and truancy were also decreased.

Menard and Grotz (2014) conducted the Bully Proofing Your School intervention with 3,497 participants aged 8 to 11, over five years. The intervention included raising awareness of bullying by conducting questionnaires, determining classroom expectations and rules, such as zero tolerance. Also, participants were taught protective skills for dealing with bullying, resistance to victimization, and assisting potential victims. The intervention encouraged a positive school climate through promotion of a 'caring majority', to try and alter the behaviour of bystanders. This intervention helped decrease bullying and related behaviours, and altered the perceptions to increase safety at schools. However, the measures used were quite broad and did not focus on specific bullying behaviours, and the outcomes became weaker once technical assistance was removed.

O'Moore and Minton (2005) evaluated the effectiveness of an anti-bullying intervention in primary schools, 520 pupils participated. The intervention involved teacher training through 12 days of seminars and workshops; a resource pack for teachers with information on bullying; a resource pack for parents; working with pupils, included creating a zero-tolerance climate within the schools, hand books for pupils, encouraging support for victims. The intervention was found to decrease victimization by 19.6%. However, all the schools involved were small in size, all but one had less than 200 pupils.

Roland et al. (2010) conducted a zero-tolerance anti-bullying intervention in primary schools, 20,446 pupils aged 7 to 12 took part. The intervention involved having clear standards of positive social behaviour and zero tolerance for bullying. Sessions were 15 minutes a week, which focused on bullying and aimed to increase empathy, with discussions and activities. At break times staff wore yellow vests with the zero-tolerance logo on and teachers were given a clear intervention procedure for when bullying was identified. The intervention significantly decreased bullying, and these effects were long lasting. However, the intervention had short time limits for setting up and the time for training was limited.

Conclusion

Research has found a variety of interventions to be effective in preventing and decreasing anxiety and bullying within schools. The majority of studies have a repeated measures design, collecting data pre-test and post-test. Many studies also have a control group and collect follow-up data a year or so after the intervention has ended. The anxiety interventions included school-based activities, CBT based interventions, CBT with positive psychology, and CBT using programmes such as: FRIENDS, Friends for Life, and Cool Kids. The majority of the programmes were CBT-based, which could be due to the widely used nature of CBT. Some popular aspects of the interventions were school-based interventions with a home-based component, addressing a broad range of anxiety disorders under one intervention programme, teacher training, having textbooks that corresponded to sections of the intervention, and using activities such as role plays within the intervention.

Common limitations within the anxiety interventions included a small sample size which limits how applicable the results are to a wider population, a homogeneous sample, no long-term follow-up or high attrition rates at follow-up, low participation from parents in the home-based aspects of the intervention, parental misinformation, and using self-report measures alone.

The studies compared in this review suggest that CBT-based interventions are effective for treating anxiety within schools; and that there are a variety of CBT interventions available. The research also suggests that there are many interventions that can successfully reduce bullying in schools. The common strategies used were social skills training, discussions, computer-based programmes, CBT, role-plays, videos, zero tolerance, and teacher training. Three climates were used for some interventions; these were the class level, school level, and individual student level. These strategies aimed to improve: empathy, emotional skills, coping skills, social skills, bystander involvement, and victim support. The strategies also aimed to raise awareness and create a positive social climate.

These bullying interventions had common limitations, such as: small sample sizes, using only self-report measures, no long-term follow-up or high

attrition rates at follow-up, no control group, and brief interventions. Also, types of bullying can be interpreted differently by different individuals, which could alter the results for measuring a reduction in bullying as many of the studies take place in multiple schools. There may be discrepancies between what teachers and students view as bullying, and between different teachers and different students.

These interventions aimed to reduce anxious feelings and bullying experiences for pupils. The strategies and skills learned could also have been applicable to other stressful situations and were hopefully a useful resource for adolescents. By providing pupils with these tools, it was the hope that their outcomes after facing challenges were good; therefore, these interventions may have worked to build resilience within these groups. Whilst some interventions concentrated on either anxiety or bullying as outcome measures alone, other interventions measured potential resilience factors as well and found evidence to suggest that the intervention built these resilience factors within adolescents. These factors included self-esteem, self-efficacy, coping skills, and social skills, as well as good outcomes associated with resilience such as wellbeing (Shoshani & Steinmetz, 2014; Liddle & Macmillan, 2010; Andreou, Didaskalou, & Vlachou, 2007; Watson et al., 2010; DeRosier, 2004).

Limitations

There are several limitations to this scoping review, and it is important to acknowledge and address them. This review used the search term 'intervention' to ensure only interventions were included; however, some studies would have used terms such as 'programme' or 'approaches' instead. This search term methodology has limited the amount of studies included.

To ensure that only effective studies were included, this meant that only those with outcome measures were included. However, this meant studies that did not use outcome measures or had outcomes that were not measured at that time would have been excluded from this review. Therefore, this review is potentially missing literature that could have contributed to this review, broadening the information regarding interventions and programmes available to schools.

Contrastingly, all methodologies were included in this review. However,

this meant that those without a control condition or a follow-up were also included. Whilst these studies may have shown improvements after the intervention, without a control group it cannot be proven that these improvements were a direct result of the intervention.

Whilst the aim of this review was to provide information of successful interventions to schools for them to be made aware of the variety of interventions available to them, there are implications for only including those studies that have positive outcomes. For example, if an intervention had been assessed multiple times and only found to be successful once, if the study satisfied the rest of the inclusion criteria, that one successful time would have been included in this review along with interventions that have been successful on many occasions. Similarly, if an intervention had only been assessed a small number of times and is yet to yield successful results, it would have been excluded from this review even though it could potentially be an effective intervention.

The choice to include both whole school and targeted approaches was to provide schools with interventions that would suit their needs and resources. Whilst a school-wide approach would be most beneficial by reaching a wider audience and promoting an atmosphere for bullying prevention and/or support for anxiety, not all schools have the resources and budgets available to them to conduct whole school approaches. This review aims to reach as many different teachers and schools, from a variety of backgrounds, in a wide range of locations that differ in socioeconomic status. Therefore, it is necessary to ensure that those schools with limited resources are still made aware of interventions that are within their means. Targeted interventions may be more realistic for some schools and may be beneficial for specific pupils that need extra support during transition if a whole school intervention is not feasible.

One discovery from this review is that a number of the interventions included aimed to prevent anxiety or bullying and provided pupils with the skills and strategies necessary to negotiate these challenges. However, other interventions aimed to promote wellbeing, to provide pupils with skills and strategies to improve their wellbeing and ensure they continue to thrive. These interventions follow different approaches and showcase to schools the variety of interventions available to them. Whilst some schools may need interventions that prevent bullying or

anxiety, other schools may need interventions that promote wellbeing. For some interventions, anxiety or bullying was combatted by approaches that built wellbeing.

The studies compared in this review suggest that many different interventions are effective for reducing bullying within schools; many interventions are whole-school based which seems effective as it creates an atmosphere for all students within the school rather than certain classes.

School Transition Anxiety

Abstract

Background: The transition from primary school to secondary school could have been the first major life event that young adolescents faced. Potentially, this move was the first time these individuals needed to employ their resilience to navigate the stress that transition incited.

Objective: The aim of this research is to determine how anxiety and worry about transition changes throughout school transition.

Methods: Pupils completed anxiety and transition worry measures both before leaving primary school (N=184) and once they started secondary school (N=171). The changes throughout transition were compared. Pupils were also asked free-text questions regarding their feelings and concerns about transition.

Results: For the majority of pupils, anxiety and transition worry decreased following transition to secondary school. Before transition, approximately a third of pupils were above threshold for anxiety and a quarter were above threshold for transition worry.

Conclusions: Our findings suggest that pupils' anxiety and worries are mostly anticipatory. Pupils' are at the precipice of their transition process before they leave primary school; suggesting that the transition process begins before pupils leave primary school.

The following chapters will focus on the impact school transition has on pupils. These chapters will investigate how anxiety levels and worries concerning transition change over the course of a significant life event for young adolescents (Sirsch, 2003). The research will also investigate what promotes resilience for this group and which factors enable a successful transition for pupils.

School Transition

Transition from primary school to secondary school was an important milestone for children; friendship groups changed and pupils' identities were formed through such friendship groups (Brown, 1990). Transition, therefore, may be one of the first challenging life events that young people faced (Loke & Lowe, 2013; West, Sweeting & Young, 2010; Bailey & Baines, 2012), requiring adaptation to new environments and social groups simultaneously; children having left typically small, familiar primary schools, in which most of their lessons were delivered in the same classroom with the same teacher, and were then faced with negotiating a much larger and unfamiliar secondary school, where they were the youngest members. Previous research has found that around 10% of pupils struggle with transition to secondary school (Youngham, 1986). Transition included leaving primary school and starting secondary school, both these events, therefore, made up the entire transition process.

Prior to transition pupils may have felt worried and apprehensive (Howard & Johnson, 2000), some regarded this move as physically, socially and emotionally threatening (Symonds & Galton, 2014) which may have created high levels of anxiety (Grills-Tauechel, Norton, & Ollendick, 2010). Some pupils, however, appeared to deal with transition and viewed it with eager anticipation (Rudduck, 1996). These young people could be argued to be more resilient, equipped with the skills and strategies that enabled them to overcome any worries they had and the challenge of their new school. Encouraging young pupils to view transition as an opportunity to grow and flourish, expand their horizons, and explore new surroundings may enable them to have a more positive experience (Sirsch, 2003) with more positive consequences as a result (Mackenzie, McMaugh, & O'Sullivan, 2012).

Research on school transition has primarily explored the impact of transition, and young people's concerns, on academic performance, social relationships, and emotional wellbeing.

Academic Impact

A post-transition 'dip' in academic achievement has been reported by West, Sweeting, and Young (2010) and Uvaas and McKeivitt (2013). The stress of transition could have impacted on pupils' self-confidence in the classroom and may have resulted in disengagement from school as a result (Sutherland et al., 2010), affecting their cognitive skills, and hence post-transition decrease in academic performance (Tobbell, 2003). Indeed, Duchesne, Ratelle, and Roy (2012) argued that those young people who worried about the upcoming workload in secondary school, and who had their worries confirmed at transition, were those who experienced a dip in academic performance and poor adjustment into secondary school. McIntosh et al. (2008) have also revealed that pupils who struggled with transition to secondary school had lower rates of school attendance and lower academic attainment, which increased the likelihood of them dropping out of school altogether.

Social Impact

Much research has revealed that many young people worried about specific aspects of transition, including getting lost (Gray et al., 2011), being bullied (Symonds & Galton, 2014), and feeling out of place in their new school (O'Brennan & Furlong, 2010). If pupils lacked a sense of belonging to their new school they may have become more at risk of developing emotional problems and experience greater anxiety (Hanewald, 2013). The likelihood of pupils being bullied has also been suggested to increase after school transition; as the social hierarchy was reorganized and older pupils attempted to assert their dominance over new pupils that may have threatened their standing within the school's social hierarchy (Hanewald, 2013).

Rice, Frederickson, and Seymour (2011) assessed pupils' feelings towards the move to secondary school both before and after transition. They found evidence to suggest that the greater the number of school concerns reported when

starting secondary school, the less likely pupils were to trust and respect teachers in their new school and to like school, which had the potential to damage their relationship with these new teachers.

Worry and Wellbeing

Worry has been defined as ‘a negative, uncontrollable chain of thoughts and images about future and uncertain events’ (Borkovec et al., 1983), and despite conceptual similarities, has been found to be independent of anxiety symptoms (Davey et al., 1992); worry was the cognitions about the future, and anxiety was the *result* of these cognitions. Duchesne, Ratelle, and Roy (2012) found evidence to suggest pupils with more worries before transition were more likely to have trouble adjusting to secondary school after transition; the research found that worries were specifically linked to secondary school adjustment and were detectable two years after transition. However, other research has also found that worries about safety, in both a physical and emotional sense, had quelled for most pupils after the first few weeks of secondary school (Symonds & Galton, 2014).

An unsuccessful transition could have caused a decrease in self-esteem (Sirsch, 2003) and an increase in anxiety and depression (Bailey & Baines, 2012). Research has investigated how pupils felt before and after transition and the impact transition had on their emotional well-being; the results regarding anxiety during school transition are mixed. Some studies suggested that anxiety symptoms *increased* following transition (Benner & Graham, 2009; Lester & Cross, 2015); whereas, others suggested that anxiety *decreased* after transition (Grills-Tauchel, Notron, & Ollendick, 2010; Uvaas & McKeivitt, 2013; Lohaus et al., 2004). Waters et al. (2012) found 31% of students experienced a ‘difficult or somewhat difficult’ school transition and, as a result, experienced higher levels of depression and anxiety by the time they finished their first year at secondary school. Even though the majority of their sample didn’t seem to find transition difficult, nearly a third of the sample struggled with the challenge of moving to secondary school.

To summarize, existing research has suggested that the challenge of transition to secondary school can be stressful for some pupils, with both short and

longer-term impacts, but that there are considerable individual differences and variability in the experience of transition and its outcome.

Factors Affecting Transition

A number of factors have been suggested to influence how young people deal with transition and their anxiety and stress pre- and post- transition. These are summarized below.

Protective factors.

Protective factors included high self-esteem and successful interpersonal relationships, which have helped to reduce any negative impact of transition (Jindal-Snape & Miller, 2008). Indeed, a positive relationship with friends and parents throughout the move has been found to protect against feelings of isolation and anxiety when pupils started secondary school (Carter et al., 2005). Brewin and Statham (2011) found evidence to suggest that a positive relationship with teachers at primary school was strongly associated with developing resilience to the stress of transition, which helped to transition smoothly.

Risk factors.

Young people who failed to form positive relationships with peers, staff, or parents, however, have been shown to experience higher levels of stress and anxiety when they moved to secondary school (Brewin & Statham, 2011). This suggested that the nature of the primary school climate, including teacher support, peer relations, and school identity (Wang et al., 2016) could have impacted on the outcome of pupils' transition. Outside of the school setting, those pupils who came from families with a low socioeconomic status (Grolnick et al., 2000) or had learning, physical or emotional difficulties (Bloyce & Frederickson, 2012) had been found to be more likely to experience difficulty adjusting to their new school after transition.

Gender differences have also been reported regarding how pupils handled school transition. Some research argued that girls coped with the challenge of transition better than boys. This may be because boys were thought to be more at

risk of disengaging from school (Symonds, Galton, & Hargreaves, 2014). Serbin, Stack, and Kingdon (2013) argued that boys received less parental support prior to transition than girls and that boys were more likely to have difficulty adapting to secondary school post-transition. Rice, Frederickson, and Seymour (2011) found evidence to suggest that girls were more likely to have a positive attitude towards their new school and teachers after transition.

However, other research found evidence to suggest that girls were more likely to struggle to adjust emotionally to their new school, compared to boys (Duchesne, Ratelle, & Roy, 2012); and that girls had higher levels of anxiety than boys both before and after transition (Grills-Taquechel, Norton, & Ollendick, 2010), and worried more about environmental challenges regarding transition before and after they move schools (Loke & Lowe, 2013). Despite these findings, it remains unclear from this research which gender is more likely to experience problems because of transition or whether gender differences vary in the different aspects of transition.

Preparation for Transition

Schools were aware of the potential problems transition may cause and were required to develop policies to mitigate its impact. Whilst all pupils were given an induction day at their new school, prior to transition, the majority of schools in England had their own individual transition policies (Birmingham City Council, 2017). Schools had the autonomy to provide any extra preparation strategies that they thought would improve pupils' transition experience and included for example, secondary school staff members visiting the primary school students, summer school programmes, and peer support post-transition (Evangelou et al., 2008).

Determining Transition Worries

Previous research frequently used free-text questions or interview style research in order to find out how pupils felt about transition and their concerns (Coffey, 2009; Mackenzie, McMaugh, & O'Sullivan, 2012). These methods gave pupils the opportunity to voice any concerns or worries that were not covered by quantitative measures. There has been an increasing drive for young peoples' input and involvement in research, particularly with reference to their individual

needs. Using free-text questions can help to provide researchers with a broader, and more accurate, idea of pupils' specific transition worries.

In summary, research has established that the transition to secondary school was a challenge for some young people, but it is still not clearly understood how the experience of transition may impact on pupils' emotional wellbeing as they begin their new life in secondary education. Previous findings have highlighted the uncertainties associated with changes in emotional wellbeing during this move. Anxiety has been found to both increase and decrease following transition. However, much of the research has taken place in a variety of countries (UK, Canada, USA, Germany, Austria, Australia) where pupils' transition took place at different ages which may have affected their experience and outcome or focused on young people from specific backgrounds, including urban or suburban, low or upper-middle socioeconomic status. It was rare for one study to include a mix of all these backgrounds. Previous studies have also focused on either pre-transition or post-transition anxiety. The present study aims to investigate pupils' anxiety levels *throughout* transition, both before and afterwards in order to examine how anxiety changes and when anxiety is at its highest, and to better identify the time when pupils may need extra attention from schools to improve transition outcome. It is also important to understand how anxiety behaves at both pre- and post-transition, and the differences between anxiety levels at these times. This study aims to better understand what predicts a successful transition for pupils, through examination of the worries and anxiety levels of primary school pupils, pre-transition, and the impact of transition on these. After careful consideration of the previous research and the impact of transition on pupils, this study hypothesised that the challenge of school transition and all it entails will cause anxiety and worries to increase once pupils reach secondary school.

Aims

The aim of this study is to determine the nature of the feelings and concerns that pupils have about transition before they leave primary school; to test hypotheses concerning how pupils' specific worries and overall anxiety levels change from pre- to post-transition; and to uncover different patterns of transition including gender differences. Complementary methods of standardized measures

and free-text questions will be used to ensure all feelings and concerns are explored.

Hypotheses

1. Pupils' anxiety will increase following transition from primary school to secondary school.
2. Pupils' worries about transition will increase following transition from primary school to secondary school.

Method

Sampling

99 schools across the socioeconomic and demographic spectrum in the West Midlands were approached to take part in the study. Of these, ten accepted and were subsequently contacted via email, phone or in person through their Educational Psychologist.

Design

A prospective cohort study with two time points: pre-transition, primary school (T1) and post-transition (T2) at secondary school. The independent variable for this study was transition from primary school to secondary school. The dependent variables for this study were the level of students' anxiety and worries.

Inclusion/Exclusion Criteria

Primary school pupil, in Year 6. There were no exclusion criteria.

Procedure

Students and parents were provided with information sheets and informed consent was obtained from both parents and students. Parents were given the information sheets at least a week before the study commenced.

Following discussions with individual schools, young people were organized into groups dependent on whether they were able to complete the measures independently or needed help (i.e. from a teaching assistant). Students completed the questionnaires at two time points under the supervision of the researcher – June (pre-transition) and September-December (post-transition). Once students had completed the measures at pre-transition, their primary school provided information of which secondary school they were to attend, and the secondary schools were then contacted to arrange data collection for post-transition. All students were reminded at the start of each time-point that they were free to withdraw at any time. Parents and secondary schools were provided with

options for conducting the follow-ups: at the secondary schools, on the phone, at their home or online, if necessary.

In order to determine when transition starts and ends, pupils were asked about their transition worry once they had started secondary school. Students may still worry about getting lost, fitting in, or the work being hard in the first term of secondary school.

Ethics and Consent

Informed consent was obtained from both parents and pupils. Ethical approval was granted by the University of Warwick's Biomedical and Scientific Research Ethics Committee, with the reference number REGO-2015-1686 (See Appendix 2). The study required informed consent from both parents and pupils. Informed parental consent was obtained before pupils were approached to take part in the study. All parents were given a letter containing details of the study and were asked to give informed consent in order for their child to participate. Pupils then needed to give informed consent prior to completion of the questionnaire (See Appendix 3). This procedure was used in all schools. Information about the research and contact details for relevant researchers was sent to all parents and pupils in the Participant Information Leaflet (See Appendix 4). All parents were told that they can remove their child from the study at any time, and pupils were reminded of this in the information sheet at the start of the study. They were also given the information needed if they wish to remove their data from the study. To keep the data confidential, each participant was assigned a number so that no identifiable data was used in the study, to ensure the data is anonymous.

Measures

Anxiety.

State-Trait Anxiety Inventory for Children (Spielberger et al., 1973).

This was used to assess students' anxiety symptoms. This measure uses two scales: state and trait anxiety; and is suitable for children aged nine to 12. The state anxiety subscale is concerned with how pupils are feeling at that *particular moment* in time. State anxiety is typically described as feelings of worry and tension that are consciously perceived; the intensity of these feelings can fluctuate

depending on the situation and amount of stress the child is experiencing. The trait anxiety subscale is concerned with how pupils feel *generally*. Trait anxiety is the likelihood of individuals to experience anxiety when faced with stressful situations; for example, those with high trait anxiety scores are more likely to respond to stressful situations with symptoms of state anxiety. The scale has a reliability Cronbach's alpha of 0.78-0.81; the test-retest reliability is $r_s = 0.65-0.71$ (Cooley-Quille et al., 2001). The booklet that accompanies the measure advises that for the state subscale, a score above 30 suggests high state anxiety and a score above 36 (males) and 37 (females) suggests high trait anxiety. This 40 item, self-report measure uses a Likert scale from 1 to 3; the scoring range is 20-60 for each scale, and 40-120 for the entire measure. An example question is: "I feel: Very relaxed, Relaxed, Not relaxed". The childhood norms for this measure for state anxiety are: 30.10 (5.62) for males and 30.30 (6.40) for females; for trait anxiety are: 36.30 (6.80) for males and 38.10 (6.06) for females (Spielberger et al., 1973).

Worries and concerns about transition.

Environmental School Transition Anxiety Scale (ESTAS) (Loke & Lowe, 2013).

The ESTAS assesses the environmental concerns students have about the school transition, and is suitable for students aged nine to 12. This 19 item, self-report measure uses a Likert scale from 1 (Never) to 5 (Always); the scoring range is 19-95. The ESTAS has an Academic subscale which is concerned with the academic environment of the new school, for example '*I worry about my class grades*', '*I fear that I will fail my classes*'. And an Organization subscale which is concerned with routines, rules and structure of the new school, for example '*I worry about going to the wrong class*', '*I am afraid that I will be unable to find my locker*'. The scale has a reliability Cronbach's alpha of 0.88 to 0.91; the test-retest reliability for the scale is 0.75. The higher the score on this scale, the more environmental transition anxiety the participant has.

Interpersonal School Transition Anxiety Scale (ISTAS) (Loke & Lowe, 2014)

The ISTAS assesses interpersonal anxieties students have during the school transition and is suitable for students aged nine to 13. This 29 item, self-report measure uses a Likert scale from 1 (Never) to 5 (Always); the scoring range

is 29-145. The ISTAS has three subscales: Parent Relationships, for example '*I worry about my parents talking to other students' parents*', '*I am concerned that my parents will help me less with my homework*'. Teacher Relationships, for example '*I worry about what my teachers would expect of me*', '*I am concerned about what my new teachers think about me*'. And Peer Relationships, for example '*I am scared that no one will talk to me*', '*I am concerned about what other students think about me*'. The scale has a reliability Cronbach's alpha of 0.85 to 0.96; the test-retest reliability for the scale is 0.72 to 0.82. The higher the score on this scale, the more interpersonal transition worries the participant has.

Self-reported feelings and worries.

Pupils were also given the opportunity to describe in free-text the answers to two questions asked at pre-transition. These questions focused on their main feelings and concerns about moving to the secondary school and also gave the pupils a chance to voice anything that was not covered by the ESTAS or ISTAS. These questions were guided by those used by MacKenzie, McMaugh and O'Sullivan (2012): '*How do you feel about going to secondary school?*' and '*What concerns do you have about going to secondary school?*'

The answers to both these questions were categorised through a content analysis and broad categories emerged. The main themes of the answers were explored and assigned to one of the groups depending on the nature of the text.

For '*How do you feel about going to secondary school?*', the responses were coded into four groups: **positive, negative, mixed, or indifferent**. For the positive group some examples of responses were: '*excited*', '*confident*', '*relaxed*', '*I feel happy because I am able to make a new start*'. Negative reactions included: '*scared*', '*upset*', '*I worry about my grades and how I will fit in*'. For the mixed group some examples are: '*nervous and excited*', '*I feel scared but calm*', '*I feel happy because it is a new start but sad because I am leaving my friends behind*'. And an indifferent response was: '*not bothered*'. The mixed group also included responses that included both 'positive' and 'negative' feelings, defined above.

For 'What concerns do you have about going to secondary school?' the main themes of the responses were explored, and eight main categories emerged: **Social**, worries about making friends and settling in socially to their new school; **Threats**, worries about being bullied; **School Size**, concerns about getting lost or how big the new school will be; **The Work**, worries about the increased academic demands that pupils will face; **Doing Things Wrong**, concerns about the changes in rules or strictness of their new school; **Logistics**, worries about the change in how pupils will get to school or have to remember certain books as they change classrooms; **None** and **Multiple**; Students in the multiple category raised concerns in more than one of the categories mentioned above. Examples of social responses include: *'Making new friends and getting on with the teachers'*, *'losing friends'*, *'not fitting in'*. Responses in the Threat category included: *'bullies'*, *'other kids'*, *'bigger kids'*. Examples of school size concerns are: *'my secondary school is so big that I sometimes worry that I might get lost'*, *'being late'*, *'school size'*. Responses in the work category are: e.g. *'hard lessons'*, *'home work'*, *'not enough support'*. Examples in the doing things wrong category include: *'strict teachers'*, *'making mistakes'*, *'getting in trouble'*. Responses in the logistics category include: *'carrying everything'*, *'swapping classrooms'*, *'walking to school'*. Examples of the multiple responses are: *'Bullies, hard lessons, strict teachers'*, *'Getting lost in school and getting detention'*, *'My exams and getting lost'*.

All 184 self-reported feelings and concerns that were reported by pupils are shown in Appendix 12. Further explorative analysis of the data can be found in Appendix 11.

Results

The Sample

Ninety-nine schools were invited to take part. Eighty-nine schools declined to take part. The majority of schools did not take part because they did not reply to the emails and phone calls. The remainder declined because they did not have the time needed to accommodate the research or because they had entered Offsted 'Special Measures'.

A total of 394 pupils from the ten primary schools were invited to take part. One hundred and eighty-four parental consent forms were completed and returned (consent rate=46.7%).

The 184 pupils then transitioned to 33 secondary schools. Some of the secondary schools were approached by phone and email before transition to make them aware of the study, and all schools were contacted by phone and email after transition to invite them to take part in the study. Of the 33 secondary schools, 29 agreed to take part, which resulted in 171 pupils at post-transition giving a rate of attrition of 7%. Table 3. shows the breakdown of pupils pre- and post-transition and the characteristics of those lost at follow up; including the mean and median scores of the state anxiety, trait anxiety, ESTAS, and ISTAS measures at pre-transition and post-transition. The mean state and trait anxiety scores were lower than the population norms reported by Spielberger et al. (1973).

Table 3. Descriptive statistics of the sample, with pre-transition data from those lost at follow-up

	Pre-transition	Post-transition	Lost at Follow-up
N	184	171 (7% attrition)	13
Age mean (SD) (0.28)	10.89 (0.32)	11.13 (0.34)	11.08
Gender: Male	67	63	4
Female	117	108	9
Diagnoses/Challenges*	12	11	1
Schools	10	29	8
State Mean (SD) (5.24)	29.39 (5.99)	27.18 (5.65)	31.08
State Median	29	26	32
Trait Mean (SD) (5.60)	33.45 (7.82)	29.70 (8.09)	33.00
Trait Median	32	27	31
ESTAS Mean (SD) (11.89)	46.16 (14.10)	37.11 (13.08)	44
ESTAS Median	47	35	40
ISTAS Mean (SD) (19.31)	61.17 (24.53)	49.77 (22.01)	56.08
ISTAS Median	55	42	56

*Note: *any pre-existing diagnoses or issues, i.e. learning disabilities, anxiety, alcoholic parent.*

The data of those Lost at Follow-up is pre-transition data

Hypothesis 1: Pupils' Anxiety Will Increase Following Transition from Primary School to Secondary School

The mean state and trait anxiety scores for pupils at pre-transition and post-transition were compared in order to see how transition affects pupils' anxiety levels.

Contrary to the hypothesis, there was a significant *decrease* in anxiety scores following transition to secondary school: the paired t-test for State anxiety was: $t(170)=4.467$, $p=.000$; for Trait anxiety: $t(170)=7.727$, $p=.000$. (See Table 3.) Small effect sizes were found for this reduction: 0.38 for state and 0.47 for trait.

Patterns of change in anxiety following transition.

The decline in scores suggests that there was anticipatory anxiety prior to transition; however, the size of the SD for the sample (Table 3.) suggests this finding may conceal variability with some young pupils' anxiety levels possibly *increasing* following transition or remaining unchanged. We therefore sought to ascertain the various patterns of change over time using the cut-off criteria for 'high' and 'normal range' anxiety applied to pre and post data points; these can be seen in Figures 7 and 8 below. For state anxiety the threshold cut-off is a score of 31 and for trait anxiety the cut-off is a score of 37 for Males and 38 for Females (Spielberger, 1983).

State anxiety.

Prior to transition, 63 of the 171 (37%) pupils were above the threshold for state anxiety (mean 35.4, SD 4.5); and 108 had scored within the normal range (mean 25.7, SD 3.2). Following transition, those above the threshold declined to 39 of the 171 (22%) pupils, (mean of 35.2, SD 4.4) and 132 scored within the normal range (mean 24.8, SD 3.4).

Twenty-four of the 63 (38%) pupils that scored high for state anxiety remained in that group after transition (mean 36.1, SD 5); and 39 of the 63 (62%) pupils improved after transition (mean 26.5, SD 3.2) – see Figure 7.

Of the 108 pupils scoring within the normal range, 15 (14%) deteriorated, now scoring high for state anxiety after transition (mean 33.7, SD 2.7); and 93 of the 108 (86%) pupils that scored within the normal ranges for anxiety remained in that group after transition (mean 24.1, SD 3.3). (These temporal changes are illustrated in Figure 7.)

Although the mean scores decreased overall, some individual anxiety scores did increase, and 38% scoring high remained unchanged following transition, which highlights the variability of anxiety levels within the sample over time.

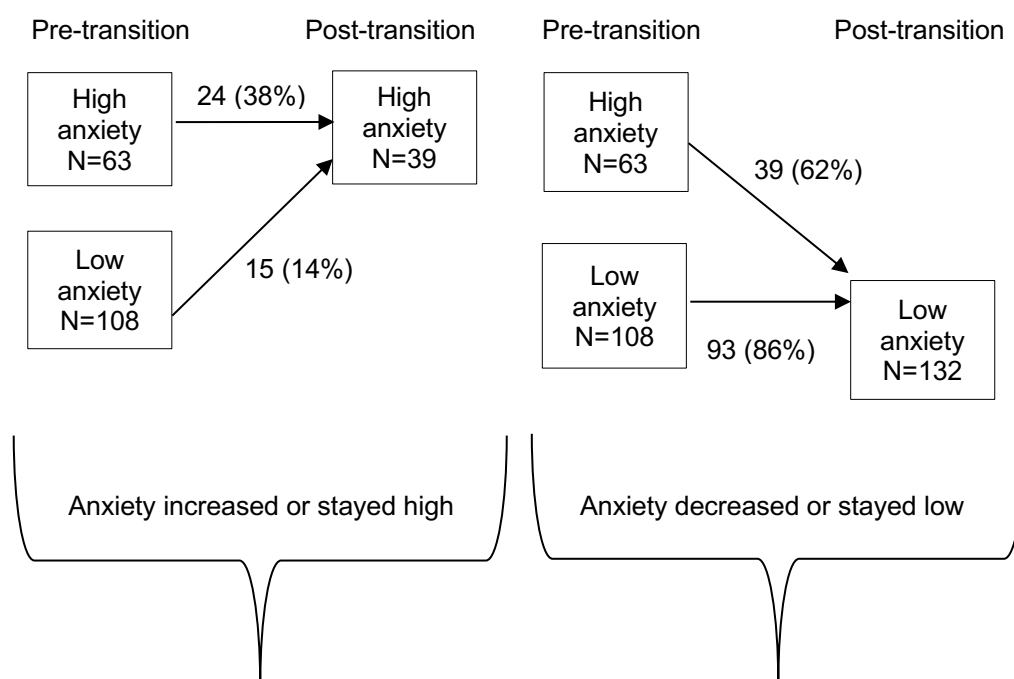


Figure 7. The number of pupils (N) in the High and Low State anxiety group at pre-transition to post-transition; the number (and %) of pupils moving to or remaining in each group as they transition is also shown.

Trait anxiety.

The results for trait anxiety broadly follow that for state anxiety.

Prior to transition, 52 (30%) of the 171 pupils were above the threshold for trait anxiety (mean 43.4, SD 4.8) and 119 scored within the normal range (mean 29.1, SD 4.4). Following transition, this declined to 28 of the 171 (16%) pupils scoring high for trait anxiety, (mean 44, SD 5.5) and 143 scored within the normal range (mean 26.9, SD 4.9).

Twenty of the 52 pupils (38%) that scored high for trait anxiety remained in that group after transition (mean 45.4, SD 5.9); and 32 of the 52 pupils (62%) improved after transition (mean 30.1, SD 4.3) – see Figure 8.

Of the 119 pupils scoring within the normal range, eight (7%) deteriorated, now scoring high for trait anxiety after transition (mean 40.5, SD 1.4); and 111 of the 119 (93%) pupils that scored within the normal ranges for anxiety remained in that group after transition (mean 26, SD 4.7). (These temporal changes are illustrated in Figure 8.)

Even though the mean scores decreased, 38% scoring high remained unchanged following transition, again highlighting the variability of scores within the sample.

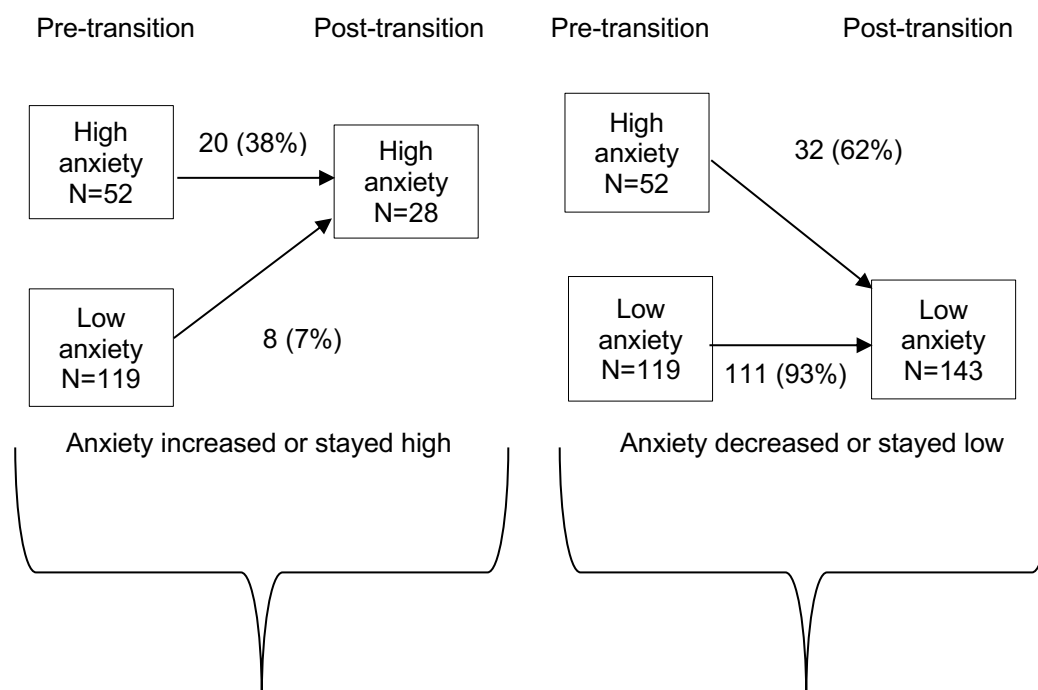


Figure 8. The number of pupils (N) in the High and Low Trait anxiety group at pre-transition to post-transition; the number (and %) of pupils moving to or remaining in each group as they transition is also shown.

Hypothesis 2: Pupils' Worries About Transition Will Increase Immediately After Transition from Primary School to Secondary School.

The mean ESTAS and ISTAS scores for pupils at pre-transition and post-transition were compared in order to see how transition affects pupils' transition worry levels.

Again, contrary to the hypothesis, there was a significant *decrease* in transition worry scores following transition to secondary school: the paired t-test for ESTAS was: $t(170)=9.166$, $p=.000$; and for ISTAS: $t(170)=7.250$, $p=.000$. (See Table 3.) Small effect sizes were found for this reduction: 0.32 for ESTAS and 0.24 for ISTAS.

Patterns of change in transition worries following transition.

The decline in scores suggests that there was considerable anticipatory worry prior to transition; however, the SD for the sample (Table 3.) also suggests this finding may conceal variability and the possibility that some young people's transition worry increased following transition or remained unchanged. We therefore sought to ascertain any patterns in transition worry in the pupils prior to and following transition. These are presented in Figures 9 and 10 below. As these measures have no formal cut-offs, the 4th quartile value was used as a cut-off: these values were 55 for ESTAS and 80 for ISTAS.

Environmental worry.

Prior to transition, 44 (26%) of the 171 pupils were above the cut-off for environmental worry (mean 62, SD 5.82); and 127 pupils scored within the normal range (mean 38.9, SD 9.98). Following transition, those scoring highly declined to 15 of the 171 (9%) pupils (mean 63.73, SD 6.82), with 156 pupils scored below the 4th quartile (mean 32.54, SD 8.94).

Ten of the 44 (23%) pupils that originally scored in the top quartile remained in that group after transition (mean 66.3, SD 6.43); and 34 of the 44 (77%) pupils improved after transition (mean 61.09, SD 5.15).

Of the 127 scoring below the cut off for high transition worry, five (4%) pupils increased worry after transition (mean 48.6, SD 7.89); and 122 of the 127 (96%) pupils that scored below the cut off remained in that group after transition (mean 38.53, SD 9.88). These temporal changes are illustrated in Figure 9.

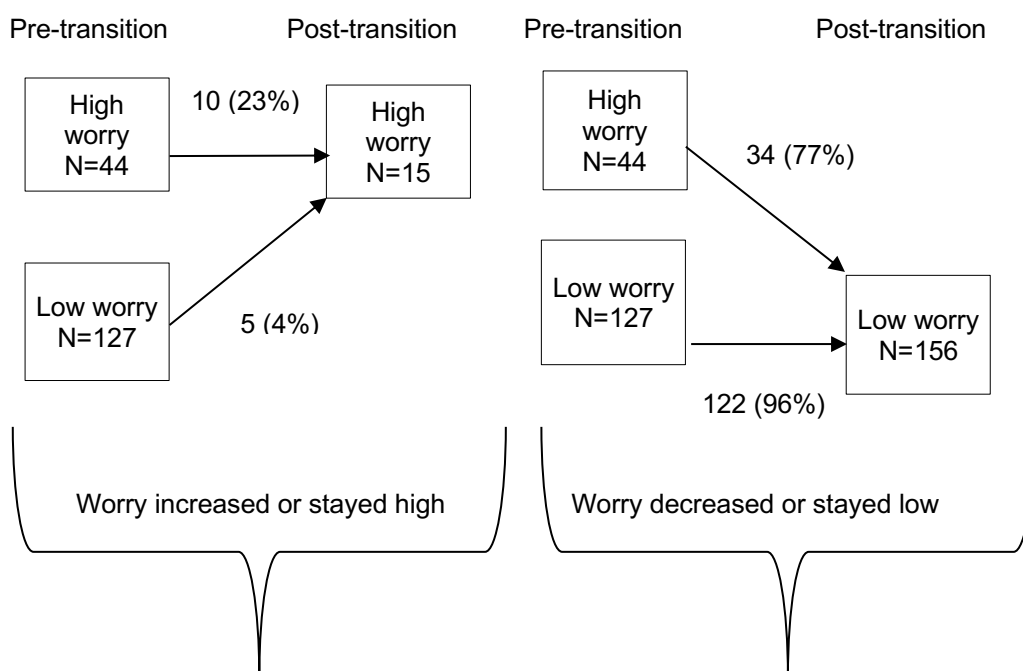


Figure 9. The number of pupils (N) in the High and Low Environmental worry group at pre-transition to post-transition; the number (and %) of pupils moving to or remaining in each group as they transition is also shown.

Interpersonal worry.

These patterns broadly reflect the findings for environmental worry.

Prior to transition, 43 (25%) of the 171 pupils were above the cut-off for interpersonal worry (mean 94.84, SD 14.19) and 128 scored within the normal range (mean 49.86, SD 15.03). Following transition, this declined to 18 of the 171 (11%) pupils scoring highly (mean 100, SD 14.38), and 153 pupils scored below the 4th quartile (mean 43.86, SD 13.58).

Twelve of the 43 (28%) pupils that originally scored in the top quartile remained in that group after transition (mean 109.42, SD 14.39); and 31 of the 43 (72%) pupils improved after transition (mean 80.19, SD 9.38).

Of the 128 pupils scoring below the cut off for high transition worry, six (5%) deteriorated after transition (mean 64, SD 15.75); and 122 of the 128 (95%) pupils that scored below the cut off remained in that group after transition (mean 49.16, SD 14.71). These temporal changes are illustrated in Figure 10. The boxes show the level of interpersonal transition worry at both pre- and post-transition, and the pattern of change in interpersonal worry during transition.

Although the mean scores decreased, 18 (33%) individuals either remained high in worry or their worries increased, following transition.

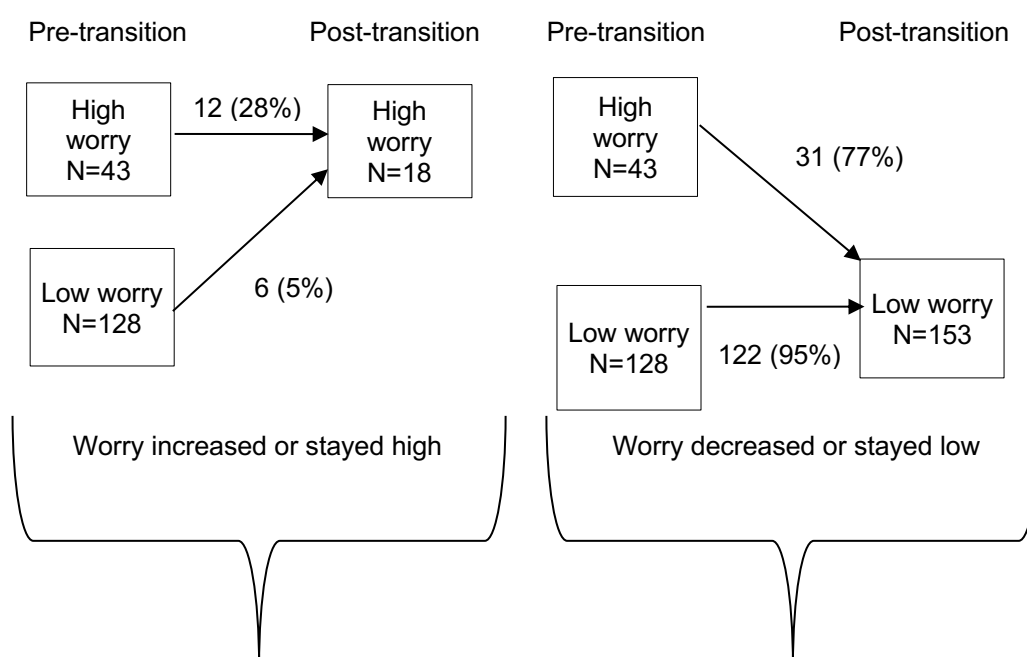


Figure 10. The number of pupils (N) in the High and Low Interpersonal worry group at pre-transition to post-transition; the number (and %) of pupils moving to or remaining in each group as they transition is also shown.

Post-transition data collection

Due to the nature of collecting from 35 secondary schools, post-transition data collection took longer than pre-transition data collection from 10 primary schools. Therefore, post-transition data was collected between September and December. To ensure the delay of some pupils' data collection did not influence the findings, those collected before and after half term were compared to establish if there was any difference in anxiety and worry scores for these two groups. Independent samples t-tests were conducted for both measures of anxiety and worry.

Table 4. Secondary school pupils' anxiety and worry mean scores before and after half term

	N	State (SD)	Trait (SD)	ESTAS (SD)	ISTAS (SD)
Before	104	26.89 (5.68)	29.14 (8.15)	35.88 (13.42)	48.49 (22.77)
After	67	27.63 (5.62)	30.57 (7.96)	39.00 (12.41)	51.75 (20.78)

The t-tests for state anxiety ($t(169)=-.826, p=.410$), trait anxiety ($t(169)=-1.124, p=.262$), environmental worry ($t(169)=-1.526, p=.129$), and interpersonal worry ($t(169)=-.944, p=.346$) were all found to not be statistically significant. These results suggested that the timing of data collection had no influence on pupils' anxiety and worry scores.

Power

G*Power was used to determine the observed power. For a sample size of 171 and α of 0.05, this study was found to have a statistical power of 0.99 for state anxiety, 0.99 for trait anxiety, 0.99 for ESTAS, and 0.94 for ISTAS. An *a priori* calculation suggested a sample of 300 pupils; however, due to constraints with requiring informed consent from both parents and pupils, and schools agreeing to take part, a final sample of 184 pupils was reached.

Discussion

This study explored pupils' anxiety and transition worries during the process of school transition. It was hypothesised that pupils' anxiety scores would increase following transition from primary school to secondary school. It was hypothesised that transition worries would increase, as well. The principal findings revealed that for the majority of young people, anxiety *decreased* once they had transitioned to secondary school, suggesting that their anxiety peaked in the final year of primary school. The results also revealed that overall transition worry *decreased* once pupils arrived at secondary school, suggesting pupils had greater transition worries *before* they left their primary school. One striking finding is that around a third of pupils were above threshold for anxiety pre-transition, and a quarter were above threshold for transition worry pre-transition. Generally, females reported higher levels of anxiety and transition worry than males both before and after transition. At pre-transition, around half of females were above threshold for anxiety compared to around a quarter of males. Our findings reflect greater levels of *anticipatory* anxiety and worry about school transition rather than anxiety and worry *at transition*.

Even though anxiety and transition worry decreased overall, some pupils' scores remained high or became high. These patterns demonstrate variability within the sample suggesting not all pupils' anticipatory anxiety and worry is necessarily resolved at transition: this could be attributed to personal resilience but could also be due to poor transition experience or unrelated to transition completely. These results were inconsistent with the hypotheses that anxiety and transition worry would increase following transition.

Interestingly, the pre-transition free-text answers were predictive of pre- and post-transition anxiety. The largest group of pupils viewed transition in a positive way and had no concerns, pre-transition. A positive view of transition was associated with low anxiety scores at both pre- and post-transition. Similarly, a negative view of transition was associated with high anxiety scores at both pre- and post-transition. Reporting no concerns was associated with low anxiety scores at both pre- and post-transition, whereas reporting multiple concerns, concerns about work, or doing things wrong was associated with higher anxiety scores at pre- and post-transition.

There is limited research regarding transition anxiety and the research that is available has been done in a variety of countries with pupils of different ages and demographics. The research done within the UK either does not focus primarily on anxiety and worries or does not use the same group of pupils both before and after transition. This research has explored how anxiety behaves in pupils as they move from primary school to secondary school in the West Midlands. Previous research has found that the median age of onset for anxiety is 11 years old (Kessler et al., 2005), the same age that UK children transition to secondary school. One review of childhood anxiety found the prevalence for any anxiety disorder to range from 2.6%-41.2% (Cartwright-Hatton, McNicol, & Doubleday, 2006). However, within this study, around a third of the pupils were above threshold for anxiety.

External Validity

A large number of schools that were approached did not consent to take part in the study, the majority did not reply to emails or telephone calls regarding the study. 53.3% of pupils and parents within these participating schools did not consent; the majority of these did not return the consent forms. There is the possibility that only schools with good transition procedures, supportive parents, and pupils with lower anxiety and worry levels chose to take part. A low consent rate increased the possibility that the participants were not representative of all possible participants, affecting the validity and reliability of the results. A low consent rate put the research at risk of sampling bias and participation bias. However, the anxiety and concern levels were high, which suggests that this was not the case. Despite the low number of pupils taking part, post hoc power was high.

Internal Validity

The study has very low attrition (7%) and each measure had good reliability. The free-text questions, despite being brief, were linked to the quantitative measures used and provide confidence that the results validly reflect that students were feeling and thinking.

These results were unexpected, but perhaps highlighted a significant phenomenon with regard to school transition and may have suggested that the

process of transition began much earlier than predicted. The results suggested that pupils may have been at the very precipice of their transition process *before* they had even left their primary school. In the last few months prior to pupils leaving primary school: students will have received their school choices, staff from the secondary school will have visited their primary school, and they will have visited their secondary school for an induction day. Originally, it was thought that these activities were suitable transition preparation; instead, our findings suggest that they were milestones within the transition process. Therefore, when pupils started at secondary school the transition process had finished for some, which could explain the decrease in anxiety scores and worries, as the stress of transition was over for them.

Both anxiety and transition worry have behaved in a similar way throughout transition, but it is not clear from this analysis whether these behaviours are linked. In the next chapter, we determine if transition worry affects anxiety and the extent to which post-transition anxiety can be predicted by pre-transition anxiety and worry. It is also important to establish whether the decrease in anxiety and transition worries linked to school transition procedures, resources available to pupils, or perhaps their individual characteristics and resilience. Therefore, the next chapter will explore the relationship between anxiety and transition worry at pre- and post-transition.

The Relationship Between Pupils' Transition Worry and Anxiety as They Move to Secondary School

Abstract

Background: Previous exploration of this sample revealed that both anxiety and transition worry decreased once pupils reached secondary school. Both these outcomes have behaved in a similar way throughout transition.

Objective: The aim of this research is to determine the relationship between anxiety and transition worry, and whether transition worry is able to predict pupils' anxiety levels once they reach secondary school.

Methods: Pupils completed anxiety and transition worry measures both before leaving primary school (N=184) and once they started secondary school (N=171). The strength of the relationship between transition worry and anxiety was determined and whether transition worry was able to predict anxiety after transition.

Results: Higher levels of transition worry were associated with higher levels of anxiety before and after transition. Changes in transition worry, pre-transition transition worry, and pre-transition anxiety levels predicted pupils' anxiety levels after transition. Specifically, interpersonal worry and changes in this type of worry were strongly predictive of post-transition anxiety.

Conclusions: Our findings link with the results found previously. Those with heightened anxiety and worry before transition will have a much harder time settling into their new school; therefore, schools should endeavour to combat these feelings before pupils leave primary school.

In the previous chapter, we found that whilst anxiety and transition worry decrease post-transition overall, there is variability within the sample and some pupils' anxiety and worry levels do increase.

The cognitive model of anxiety (Wells, 1995) highlighted how integral worry was to anxiety. Some worry could have been positive, with the potential to help protect the individual or act as a coping mechanism for them during times of distress; this could have been the worry found in many of the pupils seen in the previous chapter. The decline in anxiety and transition worry once pupils started secondary school suggests 'positive' worrying at pre-transition. However, for many worry was a negative emotion. This negative worry focused on the uncontrollability and unhelpful consequences of the individual's worry (Wells, 1995). These negative cognitions, it has been argued, ultimately resulted in the individual's anxiety. During transition, pupils' worry may have been perpetuated by their catastrophization regarding the move; pupils fixated on and overestimated what could have gone wrong. In line with the model, pupils were also likely to question themselves, their own abilities, and resilience during transition, whether they could have successfully settled into their new school well or not.

This chapter investigates whether, in line with the cognitive model, transition worry and anxiety are linked cross-sectionally and longitudinally. The study will also explore whether changes in transition worry (increase, decrease, no change) is able to successfully predict anxiety levels after transition as would be predicted by this model, and if transition worry is associated with anxiety levels.

School Transition Anxiety

Anxiety has come from the individual thinking ahead, worrying about the future (Giddens, 1991). In fact, one of the symptoms for generalized anxiety disorder from The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5) was the presence of unwarranted anxiety and worry (apprehensive expectation) that occurred more often than not, for at least six months, about a variety of potential events (American Psychiatric Association, 2013). Such apprehension may have been present in young people as they thought about moving from primary to secondary school.

School transition anxiety was defined as the tension, apprehension, worry, and nervousness felt about moving from one school to the next (Loke & Lowe, 2014). Worries about transition may have had a considerable effect on pupils' anxiety levels; especially considering that worries have been observable in most anxiety disorders (Barlow, 2004). Researchers have suggested that school transition anxiety should be differentiated from the more severe anxiety disorders and labelled as its own type of anxiety, characterized by the subclinical anxiety symptoms felt by the pupils (Loke & Lowe, 2014). It's important for schools to be aware of young people who may be particularly vulnerable and to help prevent school transition anxiety, especially as it has been suggested to be associated with poor academic performance, low self-esteem, and the development of depressive symptoms (Duchesne, Ratelle, & Roy, 2012).

Whilst the link between worry and anxiety has been recognised and established (Weems, Silverman, La Greca, 2000), theoretically anxiety was the result of cognitions – in the case of school transition, worry – but the definitive relationship between *transition* worry and anxiety within this group is unknown. In the previous chapter, both anxiety and transition worry decreased after transition, however there was variability within the sample.

This research will investigate whether transition worry behaves the same as the worry found within the cognitive model; essentially exploring their inter-relationship and testing whether post-transition anxiety can be predicted by pre-transition worry and any change in worry about transition as pupils start secondary school.

Hypotheses

1. Pupils with higher levels of transition worry will also have higher levels of anxiety before and after transition.
2. Post-transition anxiety can be predicted by pre-transition worry and any changes in worry that occur from pre- to post-transition.

Method

Sampling

99 schools across the socioeconomic and demographic spectrum in the West Midlands were approached to take part in the study. Of these, ten agreed to participate and were subsequently contacted via email, phone or in person through their Educational Psychologist.

Design

A prospective cohort study with two time points: pre-transition, primary school (T1) and post-transition (T2) at secondary school; the same sample used in the previous chapter (See Table 3. on page 102 for the descriptive statistics of this sample). The independent variable for this study was the level of students' transition worry. The dependent variable for this study was the level of students' anxiety.

Inclusion/Exclusion Criteria

Primary school pupils, in Year 6. There were no exclusion criteria.

Procedure

The procedure for this study has been described in the previous chapter (p104-p105)

Ethics and Consent

The ethics and consent procedures for this study have been summarised in the previous chapter (p105).

Measures

Anxiety.

State-Trait Anxiety Inventory for Children (Spielberger et al., 1973).

The details of this measure have been previously summarised (p105-106).

Worries about transition.

Environmental School Transition Anxiety Scale (ESTAS) (Loke & Lowe, 2013).

The details of this measure have been previously summarised (p106).

Interpersonal School Transition Anxiety Scale (ISTAS) (Loke & Lowe, 2014)

The details of this measure have been previously summarised (p106-107).

Results

As demonstrated in the previous chapter, the mean and median anxiety scores decreased at post-transition compared to pre-transition. The same was found for the environmental (ESTAS) and interpersonal (ISTAS) worries regarding transition. See Table 3. on page 95 in the previous chapter for the descriptive statistics of the sample.

Hypothesis 1: Young People with Higher Levels of Transition Worry Will Have Greater Levels of Anxiety Before and After Transition

In order to determine the strength of the association between anxiety and transition worry levels during transition, a Pearson's Correlation was conducted for pre-transition (Table 5.), post-transition (Table 6.), and between changes across transition (Table 7.).

Table 5. The Correlation (*r*) between transition worry and anxiety prior to transition

N=171	Pre ESTAS	Pre ISTAS
Pre State anxiety	.498 (<0.001)	.522 (<0.001)
Pre Trait anxiety	.706 (<0.001)	.702 (<0.001)

The r values for each correlation is shown above, with p values in parentheses

The results show positive, significant correlations between transition worry and anxiety at pre-transition. According to Cohen (1988), these correlations were 'large' ($r > .5$).

Table 6. The Correlation (*r*) between transition worry and anxiety after transition

N=171	Post ESTAS	Post ISTAS
Post State anxiety	.517 (<0.001)	.557 (<0.001)
Post Trait anxiety	.712 (<0.001)	.772 (<0.001)

The r values for each correlation is shown above, with p values in parentheses

The results show positive, significant correlations between transition worry and anxiety at post-transition. According to Cohen (1988), these correlations were 'large' ($r > .5$).

Table 7. The Correlation (r) between the change in transition worry and anxiety during transition

N=171	ESTAS Change	ISTAS Change
State Change	.247 (<0.01)	.276 (<0.001)
Trait Change	.531 (<0.001)	.460 (<0.001)

The r values for each correlation is shown above, with p values in parentheses

The results show positive, significant correlations between the changes in transition worry and anxiety from pre-transition to post-transition. According to Cohen (1988), these correlations ranged from small ($r < .3$) to large ($r > .5$).

In line with the hypothesis, these results show that pupils with higher levels of transition worry (ESTAS and ISTAS) will also have higher levels of anxiety (state and trait) before and after transition. At pre-transition, those with high transition worry were also likely to have high anxiety. At post-transition, transition worry and anxiety were also correlated. The changes in worry cognitions throughout transition were correlated with changes in anxiety throughout transition. This supports what is found in the cognitive model for anxiety, that cognitions (worries) are a crucial part of anxiety. From the results of the correlations, the relationship suggests that these cognitions may have the potential to predict pupils' anxiety levels later on in transition.

Hypothesis 2: Post-Transition Anxiety Can Be Predicted by Changes in Worry from Pre- to Post-Transition

In order to test this hypothesis, regression analyses were conducted. The anxiety levels after transition was the dependent variable. The independent variables, pre-transition anxiety scores (state and trait) and pre-transition worry scores (ESTAS and ISTAS) were force-entered in the first block of the regression; to test if transition worry predicts anxiety scores, transition worry *change* score was included in the second block.

For state anxiety, the regression equation was significant: $F(3,167)=23.055, p<0.001$, with an R^2 of .293; and $F(5,165)=21.835, p<0.001$, with an R^2 of .398 for all the variables. The regression is reported in Table 8. The standardized beta for the state pre-transition (.298, $p<0.001$ and .284, $p<0.001$ for all variables), ISTAS pre-transition (.413, $p<0.001$ and .613, $p<0.001$ for all variables), and ISTAS change (.375, $p<0.01$) scores were statistically significant. In contrast, worry about the school environment (ESTAS) was not a significant predictor of post-transition state anxiety.

Table 8. Changes in transition worry as a predictor for post-transition state anxiety

N=171	B	SE B	β	Sig.
Pre State	.279	.072	.298	.000
Pre ESTAS	-.046	.046	-.111	.323
Pre ISTAS	.095	.026	.413	.000
Pre State	.266	.068	.284	.000
Pre ESTAS	-.040	.065	-.097	.541
Pre ISTAS	.141	.036	.613	.000
ESTAS change	.005	.059	.012	.929
ISTAS change	.103	.035	.375	.004

The results were similar for the trait anxiety analysis. The regression equation was also significant: $F(3,167)=53.453, p<0.001$, with an R^2 of .490; and $F(5,165)=72.450, p<0.001$, with an R^2 of .687 for all the variables. The regression is reported in Table 9. The standardized beta for trait pre-transition (.625, $p<0.001$ and .432, $p<0.001$ for all variables), ISTAS pre-transition (.278, $p<0.01$ and .511,

$p < 0.001$ for all variables), and ISTAS change (.419, $p < 0.001$) scores were statistically significant. In contrast, worry about the school environment (ESTAS) was not a significant predictor of post-transition trait anxiety.

Table 9. Changes in transition worry as a predictor for post-transition trait anxiety

N=171	B	SE B	β	Sig.
Pre Trait	.633	.083	.625	.000
Pre ESTAS	-.115	.059	-.195	.051
Pre ISTAS	.092	.033	.278	.006
Pre Trait	.438	.069	.432	.000
Pre ESTAS	.010	.067	.017	.884
Pre ISTAS	.168	.040	.511	.000
ESTAS change	.096	.060	.154	.112
ISTAS change	.165	.037	.419	.000

These results found that interpersonal worries (ISTAS) and changes in this type of worry were strongly predictive of post-transition anxiety. This worry builds on the pre-transition anxiety to strongly predict the anxiety experienced by pupils when they finally complete the move to secondary school.

Discussion

This study explored the relationship between pupils' anxiety and transition worry during school transition. It was hypothesised that pupils with high levels of transition worry will have high levels of anxiety during transition. Pupils with higher levels of transition worry also had higher levels of anxiety before and after transition. It was also hypothesised that pre-transition anxiety levels and pre- and post-transition transition worry will predict post-transition anxiety. Post-transition anxiety was predicted by changes in transition worry and pre-transition anxiety. The results showed that anxiety at pre-transition predicted post-transition anxiety, suggesting that highly anxious primary school pupils may have a much harder time settling into their new school. Therefore, if schools were to combat these worries early on in the transition process, the anxiety levels would be lower for pupils who were at risk of high anxiety scores after transition. These conclusions link to the patterns highlighted in the previous chapter, which showed variability within the sample; whilst most pupils' scores improved, some deteriorated. This report has highlighted the similarities and differences of anxiety and transition worry during transition.

As discussed, this study explored pupils' transition worry within the cognitive framework and explored the relationship between worry and anxiety during transition. This research showed how transition worry contributed to anxiety levels during school transition.

Methodological Issues

The sample used for this study is the same as in the previous chapter, where both external and internal validity were discussed, and have been readdressed for this report.

External validity.

The issues raised in the free text questions are covered in both the ESTAS and ISTAS, which proves the inclusive nature of these measures.

As reported in the previous chapter for this sample, 53.3% of pupils and parents within these participating schools did not consent; the majority of these did not return the consent forms, possibly due to time constraints or logistic issues. There is the possibility that only schools with good transition procedures and pupils with lower anxiety levels chose to take part. However, the anxiety and transition worry levels were high which suggests that this was not the case. As seen in the previous chapter, the effect size was large despite the low number of participants.

Internal validity.

Whilst the worry and anxiety measures are correlated, the worry measures explore pupils' cognitions (*'I worry about going to the wrong class'* and *'I worry about having no friends'*), whereas the anxiety measures are concerned with pupils' physiological reactions to situations (*'I feel jittery'* and *'My hands get sweaty'*). Therefore, these measures are neither confounding nor spurious. The study had a very low attrition rate (7%) and each measure had good reliability.

Whilst using the change score for interpersonal and environmental worries provided valuable information of how pupils either improved or deteriorated over time, it did create complications with interpreting the results. For example, those with high pre-transition scores who improved but still had a high score post-transition seemed to have a good change score, yet their worry levels were still high. These pupils would be falsely represented by the change score.

Similarly, using both the change scores and pre-transition scores within the regression model will have impacted the model fit, potentially reducing the R^2 value. Therefore, the variance explained by the independent variables might not have been fully represented.

This research has explored how anxiety and transition worry behaves during school transition and the relationship between these two aspects of transition. The previous chapter showed that overall transition worry and anxiety decreases once pupils reach secondary school; whilst this is a positive outcome for pupils there were still some who deteriorated, or whose scores stayed high, once they reached secondary school. This research helps to understand why these anxiety scores were high after transition. This study has shown there are changes

in cognition throughout transition, but what remains unknown is if other factors influence the changes and variability. These changes could be due to an individual's resilience, and the factors related to that; also, the schools all dealt with transition differently, some had extensive transition procedures to help pupils adjust to their new school whereas other schools did not.

Interpersonal Resilience and Transition from Primary School to Secondary School

Abstract

Background: Previous exploration of this sample revealed that both anxiety and transition worry decreased once pupils reached secondary school; interpersonal worry was a strong predictor of pupils' anxiety levels after transition.

Objective: The aim of this research is to determine the resilience factors that engender a successful transition for pupils and will be associated with lower interpersonal worry.

Methods: Pupils completed measures of anxiety and transition worry, both before leaving primary school (N=184) and once they started secondary school (N=171). Before leaving primary school, pupils also completed measures of attachment, social identity and status, and bullying experiences; pupils were also asked if their friends were going to the same secondary school as them. The analysis determined if potential resilience factors were associated with and predictive of interpersonal worry.

Results: A Categorical Principal Component Analysis revealed that attachment, bullying experiences and social identity and status worked together to confer resilience for pupils. These factors appeared to impinge on worry and were associated with interpersonal worry; however, they did not confer resilience for pupils during school transition.

Conclusions: Primary schools can influence how successful school transition is for pupils; therefore, they should work to alleviate pupils' worries before they transition, as most worry and anxiety is anticipatory.

The previous chapter explored the relationship between worry and anxiety as pupils moved from primary school to secondary school. It has been established that, overall, pupils' worry and anxiety levels decreased during school transition. Pre-transition interpersonal worry and the change in interpersonal worry from primary school to secondary school, however, both were found to predict pupils' anxiety levels at secondary school. There were clear differences between pupils in how they approached transition, some pupils were more worried than others and for some these cognitions did not change or worsened during transition. However, other pupils appeared to adapt to the challenge of transition more easily. This research aimed to explore the reasons why these two groups of pupils may experience transition differently, and those who successfully transitioned will reveal key resilience factors for this challenge.

Interpersonal Worry

Interpersonal worries during school transition have typically been concerned with social acceptance and included pupils' relationships with their peers, teachers, and parents when they began secondary school (Loke & Lowe, 2014). Concerns about peer relationships mainly concerned worries about being teased or bullied, not having any friends, and losing touch with friends from primary school (Loke & Lowe, 2014; Duchesne, Ratelle, & Roy, 2012). Loke and Lowe (2014) found that following school transition, familiar peer networks were typically replaced by new ones and during this upheaval a new social hierarchy and networks needed to be established. Research has suggested that the bully's motivation during this time may be due to a young person's drive to assert their dominance in a new environment (Loke & Lowe, 2014). As pupils moved to secondary school they were also worried about having strict teachers, their new teachers' expectations, being treated unfairly by teachers, not getting as much attention, and having to build personal relationships from scratch (Duchesne, Ratelle, & Roy, 2012; Loke & Lowe, 2014). Some pupils have identified their relationships with teachers as one of the most difficult parts of school transition, reporting feeling anxious about their new teachers and their relationship with them (Akos & Galassi, 2004). Pupils may also be concerned about their parents treating them differently, having less support from their parents, and their parents helping them less with their work (Loke & Lowe, 2014). Additional research suggested that

pupils who had lower perceived parental support were at a higher risk for anxiety and depression during school transition (Duchesne et al., 2009).

Resilience may help young people cope with their worries both before and after transition by helping ameliorate any perceived threats about transition. Interpersonal resilience may help pupils circumvent any fears they have with regard to fitting in and being accepted at their new school. This agrees with Wells' (1995) cognitive model which suggested that resilience prevented any perceived threats (interpersonal worry) from impacting on pupils' emotions, which could have caused an increase in anxiety levels.

Interpersonal Factors

Our previous findings have revealed that interpersonal worries are predictive of pupils' anxiety following school transition. However, in order to determine why some pupils were resilient to the challenge of transition, whilst others were not, required exploration of the interpersonal characteristics of young people, that might have conferred resilience to interpersonal challenges. Interpersonal factors impacted on how individuals interacted and bonded with others. Arguably one of the most important bonds was described as attachment (Butterworth & Harris, 1994); interpersonal factors might have influenced peer interactions, such as friendships and bullying. Similarly, the social identity and status of pupils was likely to have impacted on such interactions; feeling as though they were part of the group and their place in the hierarchy of their peers.

Attachment.

Attachment has been described as an emotionally meaningful, permanent relationship with specific individuals (Butterworth & Harris, 1994); including parents, caregivers and friends. The nature of such attachments can either be secure or insecure (Bowlby, 1988). Bowlby (1969) suggested that children are genetically predisposed to form an attachment with their main caregiver. Ainsworth (1989) built upon this work, suggesting that it was the *nature* of the relationship which defined the type of attachment (secure or insecure) made. It was thought that securely attached children were more likely to believe that they were worthy of love and that other people could be trusted; for these children their caregiver was

perceived as attentive to them and sensitively responsive to their needs (Ainsworth, 1989). Insecurely attached children, on the other hand, found it difficult to trust others or believed they were not worthy of love; and their caregiver would have been insensitive to their needs (Ainsworth, 1989).

Secure attachments were likely to encourage and enable individuals to be more adventurous and face new experiences and challenges, like school transition (Bowlby, 1988). However, those with fewer secure attachments were more likely to be fearful of challenges and less willing to engage in new experiences (Bowlby, 1988). Pupils who were more enthusiastic about the challenge of transition were more open to meeting new peers and forming new friendships. This open-minded behaviour could have resulted in pupils fitting-in with their new peer group. Mackenzie, McMaugh and O'Sullivan (2012) investigated the perceptions of seventy-five girls at an independent school in Australia. Their research showed that the presence of familiar peers, and secure attachments to these peers helped ease the transition process and assist integration. These findings suggested that secure attachments were able to help with pupils' transition experience; the positive belief that securely attached people had about themselves and others may have helped to ease any worry they experienced regarding transition. Secure attachments, therefore, may have provided pupils with positive internal beliefs that helped them to cope with transition challenges.

McCarty (2005) argued that relationship problems, such as insecure attachments, are a central feature of social anxiety. Mickelson et al. (1997) found evidence to suggest that avoidant and anxious attachment styles were positively associated with social anxiety in the National Comorbidity Survey. Similarly, Colonnese et al. (2011) conducted a meta-analysis of 46 studies exploring the relationship between attachment and child anxiety. The analysis suggested that ambivalent attachment was associated with anxiety the most; insecure attachment was moderately associated with anxiety. Colonnese et al. (2011) suggested this may have been due to those individuals avoiding social interactions, as they perceived others as indifferent or for fear of rejection.

Social identity and status.

The move from primary school to secondary school has been regarded as stressful for young adolescents (Rice, Frederickson, & Seymour, 2011). Gilbert (2002) postulated that children adapted to changes in their social situation by making two basic decisions. First, they evaluated the level of threat or safety of their environment. Secondly, they assumed specific roles within that social context. If the pupils' new school was deemed unsafe, pupils may have adopted stress behaviours in response; these individuals were then likely to concentrate on negative outcomes and display defensive emotions (Gilbert, 2002). They may have become highly attuned to social rank and their place within their school's social hierarchy and be more attuned to the competitive dynamics between their peers (Gilbert, 2002). Alternatively, if their new school was deemed safe, pupils may have adopted a positive, relaxed attitude with regard to this new environment (Gilbert, 2002). These pupils were more likely to conform to social roles within their new school (Irons & Gilbert, 2005).

Therefore, for pupils to feel comfortable and accepted within their new school and peer group, they need to believe their new school is a safe environment. Friendship groups that moved with pupils from primary school to secondary school could have provided consistency and security (MacKenzie, McMaugh & O'Sullivan, 2012). By moving as a 'pack', pupils could have been more likely to feel part of the social fabric in their new school as their social status and identity in these social networks were already in place. This may have helped them regard their new school environment as a safe space and reduced their level of interpersonal worry as they transition.

Similarly, researchers have revealed that pupils who felt less connected with their families, peers and school were more likely to have higher depression, anxiety, and stress prior to transition to university (Mcgraw et al., 2008). Twenge (2000) used meta-analyses to determine that low social connectedness was associated with higher anxiety. This research supported the idea that feeling connected to those around them can help pupils adjust to secondary school after transition, providing pupils with the necessary interpersonal resources.

Experience of bullying.

Bullying may have incited feelings of isolation for victims and reduced any feelings of fitting in with their peers, which could have hindered their ability to build resilience. Researchers found evidence to suggest that bullying increased both anxiety and depression symptoms in pupils (Stapinski et al., 2015). Research following 1,363 young adolescents found evidence to suggest that those who experienced severe peer victimization were more likely to develop mental health problems (Geoffroy et al., 2018). Similarly, a causal relationship was found between bullying and mental health problems for children and adolescents in a systematic review (Moore et al., 2017). This research also argued that bullying had the potential to hamper pupils' development and their ability to flourish (Moore et al., 2017); suggesting that being bullied impeded upon a pupils' ability to transition successfully to their new school. Therefore, the absence of bullying may have given pupils the opportunity to build the resilience necessary to cope with transition challenges. Whilst it was not definite that the absence of bullying guarantees resilience, it was possible that non-bullied pupils were more likely to be resilient to the challenges that transition poses.

The presence of these interpersonal factors could have potentially resulted in lower levels of interpersonal worry for pupils either before or after transition, as they conferred resilience for pupils. These factors could also have coalesced to confer resilience for pupils. Pupils with secure attachments, with friends moving with them to secondary school, those with a high social identity and status, and those who had not been bullied may have been more likely to integrate successfully into their secondary school.

Resilience Model

The model below (Figure 11.) describes the possible process of resilience during school transition.

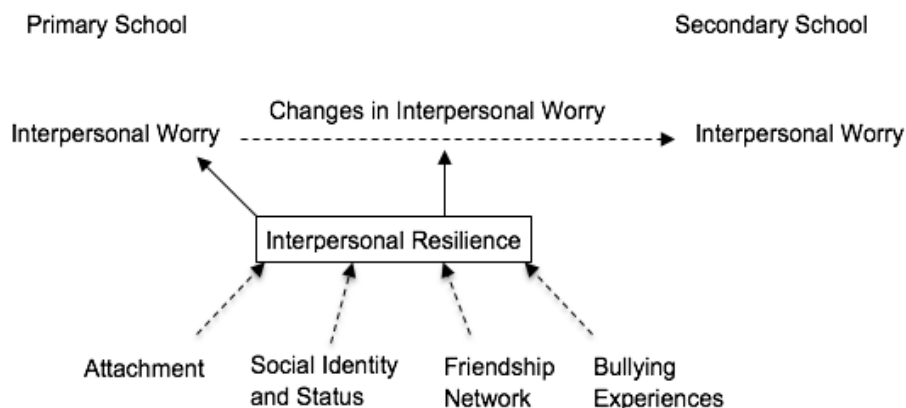


Figure 11. *The relationship between resilience and interpersonal worry throughout the transition process and the potential resilience factors (attachment, social identity and status, friendship network, and (absence of) bullying) are shown above.*

This model was consistent with the compensatory model of resilience (Fergus & Zimmerman, 2005), with attachment, social identity and status, friendship network, and (absence of) bullying serving to counteract the threat of interpersonal worries. The concept of resilience, however, is not fully understood, it can mean different things depending on the context, as discussed in Chapter 2 on page 19. The resilience needed for school transition will not necessarily have been the same as the resilience required for other challenges, for example child refugees when they moved to a different country. Our findings, however, suggested that interpersonal factors may have impacted on school transition. It had been established in chapter 5 that pupils' pre-transition interpersonal worry predicted post-transition anxiety; therefore, it follows that factors which protected pupils against this kind of worry, will have resulted in lower anxiety levels. Secure attachments, social identity and status, (absence of) bullying, and friendships moving with pupils to secondary school may all have engendered resilience in young people and may have helped to stem their worries about transition, thereby reducing their anxiety.

These interpersonal factors had the potential to work together to create interpersonal resilience within the individual. There is still much to determine regarding resilience, including the delicate balance of factors required for individuals to be resilient to certain challenges. Therefore, it could be argued that all four of these factors need to be present for pupils to be resilient to school transition, as they each offer a unique interpersonal advantage. These factors could complement each other by providing a variety of different types of interpersonal support for pupils. Therefore, these factors should be investigated collectively.

This study aims to understand how interpersonal resilience factors, namely attachment, social identity and status, bullying experiences, and having a stable friendship group may impact on young peoples' cognitions as they transition from primary school to secondary school. This will be done in line with both attachment theory and the cognitive model of anxiety.

Hypothesis

Interpersonal resilience factors, (attachment, social identity and status, (absence of) bullying, and a stable friendship network) will each be associated with, and predict the level of interpersonal worry in the process of transition from primary to secondary school.

Method

Sampling

99 schools from diverse socioeconomic and demographic settings in the West Midlands were approached to take part in the study. Of these, ten agreed to participate and were subsequently contacted via their Educational Psychologist, by email, phone or in person.

Design

A prospective cohort study with two time points: pre-transition at primary school (T1) and post-transition at secondary school (T2); the same sample has been used in the previous two chapters (See Table 3. on page 102 for the descriptive statistics of this sample). The independent variable for this study was transition from primary school to secondary school; with social identity and status, attachment security, levels of bullying, and friendship groups as mediating variables to help explain the relationship between transition and worry. The dependent variable for this study was the level of students' transition worry.

Inclusion/Exclusion Criteria

Primary school pupils, in Year 6. There were no exclusion criteria.

Procedure

The procedure for this study has been described in the previous chapters (p99-100).

Ethics and Consent

The ethics and consent procedures have been summarized in previous chapters (p100-101).

Measures

Anxiety.

State-Trait Anxiety Inventory for Children (Spielberger et al., 1973).

The details of this measure have previously been summarized (p101).

Worries about transition.

Interpersonal School Transition Anxiety Scale (ISTAS) (Loke & Lowe, 2014).

The details of this measure have been described in the previous chapters (p102).

Interpersonal resilience.

Social identity and status.

The Psychological Sense of School Membership Scale (Goodenow, 1993).

This was used to assess a child's sense of identity to their school and is suitable for young people aged 11 to 14. This measure assesses the extent to which pupils are concerned with their social fit and their place within their social group. The scale has a reliability Cronbach's alpha of 0.88; the test-retest reliability for the scale is 0.56 and 0.60 for boys and girls, respectively (You et al, 2011). The higher the score, the greater the pupil identifies with their school. This 5 item, self-report measure uses a Likert scale from 1 (Strongly disagree) to 5 (Strongly agree); the scoring range is 5-25. An example question is: '*The teachers here respect me*'.

Attachment.

Attachment Questionnaire for Children (Muris et al., 2001).

This scale assesses the child's attachment style and is suitable for children aged nine to 18. This scale is a 1 item, self-report measure; children are given three descriptions and asked to choose the one which best describes their relationships with other children. The scale classifies children into three attachment

styles: Secure, Avoidant or Ambivalent. The inter-rater reliability Spearman's correlation of this scale is 0.37, this was measured from a sample of 280 adolescents and their parents, comparing ratings of attachment (Muris & Meesters, 2002). Inter-rater reliability measures the agreement between 'raters', which were adolescents and parents, in this case. The AQC showed concurrent validity with the Inventory of Parent and Peer Attachment (IPPA), Spence Children's Anxiety Scale (SCAS, and the Children's Depression Inventory (CDI) in a non-clinical sample of 155 adolescents (Muris et al., 2001). As a 1-item measure, Cronbach's alpha cannot be computed (Muris et al., 2001).

Experience of bullying.

The Peer Interactions in Primary School Questionnaire (Tarshis & Huffman, 2007).

This scale was used to assess the experiences with bullying for Primary School pupils and is suitable for children aged nine to 12. The measure has two subscales: Victim subscale and Bully subscale. The Victim subscale focuses on times when the pupil *has been bullied* by others; the Bully subscale focuses on times when the pupil *has bullied* others. The scale has a reliability Cronbach's alpha of 0.9; the test-retest reliability is 0.84-0.88. Each subscale is totalled, and a higher score indicates higher bullying or higher perpetration. The scale is a 22 item, self-report measure that uses a Likert scale from 2 (A lot) to 0 (Never); the scoring range for the Victim subscale is 0-24 and the scoring range for the Bully subscale is 0-20. An example question is: "*Other students tease me*"

Transition with friends from Primary School.

Participants were also asked if their friends are going to the same secondary school as them.

'Are your friends going to the same secondary school as you? Yes No'

Statistics

The first step will involve a categorical principal component analysis (CatPCA). A CatPCA aims to reduce the original variables into a smaller number of independent variables, that contain most information from the original variables. Of

the four resilience factors, two are categorical and two are not. In order to conduct the CatPCA with these variables, the two non-categorical variables need to be transformed into categorical variables. After consulting with the Warwick Medical School statistician, this method was recommended, participants' individual scores for each of these variables need to be divided by the number of questions within the measure. For social identity and status, scores will be divided by 5; for bullying, scores will be divided by 12. This will retain the ordinal nature of the scores. All the variables were scored positively for this analysis. This analysis will determine if the hypothetical resilience factors are linked and contributing to the same underlying construct. If so, the resilience variables may be more powerfully reduced into a principal component, or dimension. Any such dimension will then be examined in relation to differences in pre-transition worry and *changes* in worry across transition. A Pearson r correlation will be conducted to assess the correlation between the dimension and worry scores. Multiple regression analyses will also be conducted on the dimension to evaluate the extent to which the principal component can predict pre-transition worry and the change in worry scores.

This thesis has previously established that worry scores (prior to and in the course of transition) predict post-transition anxiety. Accordingly, this chapter will focus upon the role of resilience in predicting individual differences in pupils' worry scores in the process of transition. If these factors do, in fact, predict worry scores, we would then expect these factors to predict post-transition anxiety. To confirm this link between post-transition anxiety levels and resilience factors, a regression analysis will evaluate the extent to which the principal component dimension predicts post-transition anxiety. In order to control for worry, the interpersonal worry scores will be force entered.

Results

Hypothesis: Interpersonal Resilience Factors (attachment, social identity and status, (absence of) bullying, and a stable friendship network) Will Be Associated With, and Predict the Level of Interpersonal Worry in the Process of Transition from Primary to Secondary School.

An underlying resilience dimension.

In order to determine if the hypothetical resilience factors were linked and contributed to an underlying construct of resilience, a CatPCA was conducted. The CatPCA could reveal how resilience behaves during transition and explore whether these variables can be reduced into one variable, or 'dimension', linked to the hypothetical concept of resilience. This analysis could then determine how a resilience dimension might impact on worry and anxiety in line with the hypothesis.

The CatPCA produced two new dimensions from the data, which are shown below (Table 10.). The loading of each original variable is also shown for each dimension. This table shows the weighting that each variable has within the new dimension.

Table 10. CatPCA dimensions.

N=171	Dimension:	1	2
Social identity and status		.713	-.279
Friendship network		-.105	.904
Attachment		.597	.388
Bullying experiences		.783	.080

Note: values are rounded to three decimal places

The CatPCA revealed two dimensions drawn from the interpersonal resilience variables. Dimension 1 included the variables social identity and status, attachment, and bullying experiences. These variables each had a positive and high (>.5) weighting within this dimension. The results also suggested that a migrating stable friendship network was not associated with the other three variables in this dimension, as it was a negative and low score (-.105). This

dimension was then labelled 'interpersonal self-assurance' (IS), as it is concerned with pupils' interpersonal bonding, trust and acceptance, and relationship with one another. This dimension suggested that social identity and status, attachment, and bullying experiences may be explored together, to measure pupils' interpersonal resilience. Pupils' interpersonal self-assurance levels may also be a resilience factor for school transition if this new variable can be shown to moderate transition worry for pupils.

Dimension 2, however, is heavily weighted by the friendship network variable, which will be used within the analysis as a univariate. The other three variables have a very low weighting, particularly when compared to the high friendship network result (.904). The model summary is shown below (Table 11.). The internal consistency for each dimension is shown. Table 17. also reveals Dimension 2 to not be as strong as Dimension 1, with a Cronbach's α of .065. This result supports the decision not to involve Dimension 2 any further in the analyses. The other variables focus on aspects within the individual, whereas a pupil's friendship network moving with them to secondary school is an external factor.

Table 11. CatPCA model summary of interpersonal self-assurance factors (N=171)

Dimension	Cronbach's alpha	Variable accounted for (total eigenvalue)
1 ('IS')	.437	1.487
2	.065	1.051
Total	.808	2.539

Note: values are rounded to three decimal places

The mean score and standard deviation for the Interpersonal Self-assurance variable was 4.90 (0.87) and the range of scores was 2.60-6.29.

The previous chapter has discovered that pre-transition worry and worry change scores predicted post-transition anxiety. Therefore, by determining factors that provide resilience to these worries, the key to post-transition anxiety may be found.

In order to test the hypothesis, we determined the strength of the association between the Interpersonal Self-assurance dimension and transition worry, using a simple Pearson's Correlation (Table 12.).

Table 12. The Correlation (r) between pre-transition worry and worry change scores and pupils' Interpersonal Self-assurance

N=171	Interpersonal Self-assurance
Pre ISTAS	-.370 ($p<0.001$)
ISTAS Change	.024 ($p=0.758$)

Note: values are rounded to three decimal places

The results show a significant negative correlation between the Interpersonal Self-assurance dimension and pre-transition worry, in line with our hypothesis. According to Cohen (1988), the correlation is medium ($r<.5$). However, there was no correlation found between Interpersonal Self-assurance and ISTAS change.

These results suggest that our dimension 'Interpersonal Self-assurance' has the potential to confer resilience for pupils during school transition.

In the next analysis, in order to determine if this resilience dimension influences anxiety directly, or operates via interpersonal worry, as the model suggests, the relationship between interpersonal self-assurance and post transition anxiety was explored. A regression analysis was conducted to examine whether Interpersonal Self-assurance predicts post-transition anxiety.

The Friendship Network variable will now be examined to determine if this variable confers resilience independently. This variable was not included in the CatPCA. The results of the ANOVAs comparing pre-transition worry and worry change scores with friendship network can be seen in Table 13.

Table 13. A comparison of friendship network means with interpersonal worry scores

N=171	Pre-ISTAS			ISTAS Change		
	df	F	Sig.	df	F	Sig.
Friendship Network	(1,48)	.937	$p=0.338$	(1,169)	.129	$p=.720$

Note: values are rounded to three decimal places

The results reveal that worry scores were not affected by pupils' friendship network, which supports the decision to exclude this variable from the CatPCA.

Discussion

The focus of this study was to examine which interpersonal factors may have conferred resilience for pupils as they transitioned from primary school to secondary school. It was hypothesized that interpersonal resilience factors, attachment, social identity and status, (absence of) bullying, and a stable friendship network will each be associated with, and predict the level of interpersonal worry in the process of transition. A Categorical Principal Component Analysis found that attachment, bullying experiences, and social identity and status all worked together to confer resilience for individuals, which we labelled as 'interpersonal self-assurance'. Friendship network, however, was not found to work with these resilience variables, and had no influence on worry during transition. Pupils' friendship networks happened externally to them, whereas the other variables were internal processes, which could be why they have the potential to build resilience within the individual.

Whilst these resilience factors appeared to impinge on worry and were moderately correlated with interpersonal worry, once we accounted for resilience in predicting anxiety the impact of worry could not be fully accounted for by resilience. Therefore, it cannot be confirmed that this specific combination of factors conferred resilience for pupils during school transition. Not all the worry reported by pupils was eased when they start secondary school. This could have been because there were areas of worry that could not have been affected by resilience.

Little research has explored resilience during school transition specifically, and the research that is available has been done in a variety of countries, with pupils of different ages and different demographics. The present research has established resilience factors for pupils as they move from primary school to secondary school in the UK, specifically in the West Midlands.

Methodological Issues

The sample used for this study is the same as in the previous two chapters, where both external and internal validity were discussed, which have been readdressed for this report.

External validity.

The population was taken from a range of schools across the West Midlands and was a heterogeneous sample as there were no exclusion criteria. Whilst these factors may provide resilience for pupils during school transition, they may not be associated with other challenges that require resilience. Due to the nature of resilience, which has previously been discussed, different characteristics and skills will be required for individual challenges depending on the nature of the adversity. These factors have external validity for resilience during school transition, but not for resilience in any situation.

Similarly, school transition generally only happens over the summer, this research had not considered pupils who changed schools during the school year, which whilst unconventional, has sometimes occur.

Internal validity.

The study has a very low attrition rate (7%) and each measure is valid and reliable (see Methods section). To decrease the chance of order effects, pupils only completed the independent variable questions once, at pre-transition. To decrease the chance of experimental fatigue, the questionnaires were kept short (less than 20 minutes). Teachers informed the researcher of any pupils who needed extra help and their questionnaire could then be completed in a one-to-one setting with the researcher.

There are implications for using an outcome measure, STAIC, as an indicator of resilience, such as construct validity. In this research, the good outcomes for pupils were seen as low anxiety levels whilst facing the challenge of transition, which suggested resilience in this group. This is an assumption based on the definition of resilience used, as the STAIC measures state and trait anxiety, not specifically resilience.

Similarly, although being bullied has been thought of a risk factor for mental health problems, it was postulated that the absence of this risk factor may have the opposite effect for adolescents and was included as a resilience factor in the research. The argument posed that the absence of bullying would provide

individuals with the opportunity to flourish without the threat of victimization. However, this is inconsistent with the idea of bullying as a risk factor. If the study was to be repeated, the absence of bullying may not be included as a resilience factor.

The study tried to ensure that other events in the pupils' lives would not impact on these results. To do this, the measures were completed at primary school after they had completed their SATs exams, this would ensure that any stress regarding SATs would not be mistaken for stressful feelings regarding transition.

Implications

The results failed to determine if interpersonal self-assurance conferred resilience, which would have provided pupils with the assets to overcome pre-transition interpersonal worries. If these variables were used to conduct interventions with pupils as they transitioned from primary school to secondary school, the intervention would not have successfully reduced transition worry. However, pupils' worry levels did decline, the worry was largely anticipatory, and this decline could have been due to pupils becoming more used to the idea of transition as time went on.

Limitations

The research was only conducted in the West Midlands and whilst there is potential for these factors to confer resilience to all pupils during school transition, there is no guarantee that these results are applicable to the whole of the UK. Similarly, a larger sample that reached further afield may have yielded different results, specifically regarding friendship networks. One limitation was the number of potential resilience factors measured, to ensure experimental fatigue was avoided, the list of variables was kept short. Future research could include and explore more variables, such as self-esteem or mindsets. The results of further research may also be able to reveal more variables that work together to confer resilience for pupils. A final limitation was the use of a CatPCA. For many resilience models, the whole was greater than the sum of its parts; it is unlikely that there was just one variable that built resilience, rather than a number of variables

that worked together. However, the use of a CatPCA meant that valuable data may have been lost in the process of condensing the variables. Similarly, valuable results may have been lost by not analysing all of the data. It is the hope that these variables did work together and needed to all be present in order for resilience to be built.

Further amendments could be made to improve the design of the study. If data were to be collected at multiple time points throughout the year, it could have been determined if anxiety and worry spiked at pre-transition. However, the time constraints of this study meant this was not possible. Similarly, a robust resilience measure could have been used to obtain a definitive observation of pupils' resilience, rather than relying on finding good outcomes through lower anxiety and worry scores. Also, as this has been found to be a potentially resilience building experience, pupils could have been asked what skills or knowledge they have gained, learnt, or improved through the transition process. This could help to determine the specific skills pupils emerge from this experience with. A larger sample size would have improved the validity and reliability of the results, making them more applicable to the wider population of pupils. However, due to the intricacies of recruiting a young age group to research and the occurrence of school transition happening just once a year, the window of opportunity to approach potential participants was small; therefore, the number of participants taking part in the study was smaller than expected.

Resilience in Bullied LGBTQ Adolescents

Abstract

Background: LGBTQ individuals have been more at risk of mental health problems than their heterosexual counterparts, they were also more likely to be bullied. Therefore, bullied, LGBTQ adolescents required greater resilience in order to overcome the challenges they faced.

Objective: The aim of this research is to determine the resilience factors needed for bullied, LGBTQ adolescents to have good mental wellbeing.

Methods: LGBTQ individuals aged 16-25 (N=287) answered questionnaires which measured their bullying status, mental well-being, perceived resilience, stigma-consciousness, and perceived social support. Firstly, the mental well-being of bullied and non-bullied participants was compared. Secondly, a linear regression determined whether the potential resilience factors predicted mental well-being for the bullied group.

Results: Those from the bullied group were found to have poorer mental wellbeing than their non-bullied counterparts. The findings suggested that, for this bullied group, perceived social support and self-belief predicted better mental wellbeing.

Conclusions: For bullied LGBTQ adolescents, both personal and social resilience is linked to better mental wellbeing outcomes. Perceived social support and self-belief provide these individuals with the assets and resources necessary to mitigate the consequences of being bullied and part of the LGBTQ community.

In previous chapters, research has identified high-risk adolescent groups and explored resilience processes within these populations. Previous research has explored resilience factors within many different high-risk groups. Schweitzer et al. (2007) explored resilience themes within refugees. The researchers found evidence to suggest that family support, religion, personal qualities, and comparison with others helped these individuals cope with migration stress. Whereas Montgomery (2010) found evidence to suggest that environmental factors were the most important aspect for refugees. McGloin and Widom (2001) investigated resilience in abused and neglected children, the research suggested that females had more favourable outcomes. DuMont, Widom, and Czaja (2007) supported this with their research, which suggested that females were more resilient following childhood abuse and neglect, compared to males. DuMont, Widom, and Czaja (2007) also found evidence to suggest that stressful life events, a supportive partner, being Caucasian, and growing up in a stable living situation all promoted resilience for this population. When examining resilience factors for children exposed to intimate parent violence, research has found these factors to be emotional regulation and prosocial skills (Howell, 2011). Previous research has found that different groups require different resilience factors when faced with their challenges. Therefore, this research will continue to explore resilience in adolescent mental health, taking into account that different groups require resilience factors that are personal to them and their situation. This chapter will continue to dissect the resilience of adolescents from high-risk groups; specifically, within bullied LGBTQ adolescents. Specifically, those who have emerged from adversity with good outcomes will uncover the necessary resilience factors needed to navigate their challenges.

Previous research has suggested that homosexuality may have increased the likelihood of poor mental health (Sandfort et al., 2014). In the GLSEN 2015 (Kosciw et al., 2016) survey of 10,528 students aged between 13 and 21, 90% of LGBTQ students reported being harassed at school and 70.8% reported being verbally harassed because of their sexual orientation. Compared to heterosexuals, participants of a sexual minority scored higher for sadness; suicidal ideation, suicide planning and attempts; suicide attempts treated by a doctor or nurse; and self-harm (Bostwick et al., 2014). Research by Mustanski, Garofalo, and Emerson (2010) found that a third of their LGBT participants met the criteria for a mental health disorder, including conduct disorder, major depression, and PTSD. These

LGBT youths had a higher prevalence for mental health than youths in national samples.

Russell and Fish (2016) conducted an overview of the current research regarding mental health in LGBT populations. The researchers discussed how public support and acceptance has increased for LGBT individuals over time. However, despite this LGBT individuals were still found to be at high-risk of developing mental health problems; whilst adolescence was a critical time for mental wellbeing, LGBT adolescents were reportedly more than two times more likely to be bullied at school compared to their heterosexual counterparts (Human Rights Campaign, 2013). LGBT youths reported higher levels of emotional distress, depression, anxiety, self-harm, suicidal ideation, and suicidal behaviour, compared to heterosexual youths. The overview revealed that bullying was found to be a major risk factor. 'Biased based' bullying (specific to sexuality in this case), in particular, seemed to amplify the already negative effects of bullying compared to non-biased based bullying. The protective factors found in the overview were: a protective school environment, including GSA (Gay-Straight Alliances) clubs which were student-led clubs to support LGBT students, parental and peer support, relationships, and coming out. These factors appeared to focus on social support, such as school clubs, parents, and friends (Russell & Fish, 2016).

Research has previously determined that LGBTQ youths were more at risk of bullying from peers (Robinson, & Espelage, 2011). Guasp (2012) found evidence to suggest that 55% of LGB students have been bullied because of their sexual identity in the UK. In a survey of LGBT students conducted by Kosciw et al. (2010), 84.6% reported being verbally harassed and 40.1% reported being physically assaulted, due to their sexual identity. McCormick (2016) explored the types of bullying that LGBT adolescents experience. Participants reported verbal harassments, physical assaults, sexual assaults, exclusion, bullying from peers, bullying from parents, and bullying after they had finished school. Research has found that LGBT individuals were not only targeted by peers, students reportedly received homophobic comments from teachers as well (Kosciw et al., 2014).

Lesbian and gay populations have had unique experiences of adversity and discrimination, because of this they may have needed to develop greater resilience compared to heterosexual individuals (Colpitts & Gahagan, 2016).

Researchers have suggested that perceived social support, social connectedness, positive LGBTQ role models, positive representations of LGBTQ populations in the media, family acceptance, positive school and/or work environments, access to safe places, connection to LGBTQ communities, and social activism may have served as protective factors for the LGBTQ community. The researchers determined that more research needs to be conducted to establish key resilience factors among LGBTQ individuals.

Stigma-Consciousness

Bockting et al. (2013) investigated the association between stigma and mental health in 1,093 transgender people. The research found that social stigma was associated with psychological distress in this population. Meyer (2003) produced the Minority Stress Model, which suggested that stress from stigma or prejudice resulted in higher psychological distress in LGB populations. Therefore, being bullied because of sexual identity could be more damaging than being bullied for something else. Higher psychological stress was then more likely to lead to mental health problems for this population. The Minority Stress Model suggested that stress was experienced by the minority group, in this case due to homophobic behaviour (Meyer, 2003). Lewis et al. (2003) supported this model, as they found stigma consciousness predicted depressive symptoms in their sample of LGB individuals. Their research found that the higher the stigma consciousness, the higher the level of depressive symptoms. Lewis et al. (2006) built upon this research and found evidence to suggest that high stigma consciousness was associated with negative outcomes in lesbian populations.

Research by Brown and Pinel (2003) defined stigma-consciousness as the level of self-consciousness an individual had of their stigmatization; this research revealed that those with a higher stigma consciousness perceived more discrimination. Stigma consciousness has been found to cause individuals to act critically towards those they suspected discrimination from (Pinel, 2002). Tajfel (1978) formulated Social Identity Theory, which suggested that an individual's sense of who they are was based on the group they identified with, an 'ingroup'. An individual's ingroup was found to be a large part of their identity and provided them with a sense of belonging in the world. Major and O'brien (2005) argued that stigma might have indirectly threatened an individual's identity. The researchers' formulated a model of stigma-induced identity threat, which summarised how

collective representations, situational cues, and personal characteristics can result in identity threat. Therefore, by having lower stigma consciousness, individuals might have been more likely to retain the sense of belonging that their ingroup provided. The emotional security may have assisted individuals during stressful situations and resulted in higher levels of resilience.

Perceived Social Support

Perceived social support has been found to potentially protect an individual's mental health when faced with adversity; Coker et al. (2002) found that for women who experienced 'intimate partner violence', social support was associated with better mental health. Bockting et al. (2013) investigated associations between stigma and mental health, the researchers found that stigma was positively associated with psychological stress. Similarly, Ryan et al. (2010) found evidence to suggest that family acceptance was associated with better mental health for LGBT youths. Meyer (2003) also found that perceived social support was a moderator for minority stress, in line with his minority stress model. High levels of support have been associated with resilience for young gay men (Fenaughty & Harré, 2003); and family support was found to be the main protective factor for non-suicidal self-injury and suicide attempts in LGBTQ individuals (Reisner et al., 2014). If perceived social support was found to be positively associated with wellbeing, this would support what has previously been discussed regarding positive attachments and good mental wellbeing, in Chapter 6.

Perceived Resilience

Perceived resilience focused on how able people *thought* they were at 'bouncing back' from adversity, this included an individual's beliefs in their own capabilities. Hamill (2003) found that self-efficacy was different for resilient youths compared to those who struggled to face challenges. Caprara et al. (2006) explored how positive thinking can impact on life satisfaction, self-esteem, and optimism. The researchers found that a positive outlook was associated with positive outcomes. Prince-Embury (2014) developed a three-factor personal resilience model. The first factor, Sense of Mastery, focused on an individual's perceived competencies. A greater Sense of Mastery within the model has been found to contribute to a higher level of personal resilience. Therefore, an individual

who felt more confident about their own set of skills, including the ability to ‘bounce back’ from adversity, influenced the individual’s capabilities.

In summary, research has suggested that both LGBTQ individuals and bullied adolescents are more at risk of mental health disorders. However, research has also found certain factors that have mitigated this. Evidence has suggested that individuals who were less aware of stigma directed at them which preserved their ingroup identity, perceived a high level of social support, and had confidence in their ability to ‘bounce back’ will have been equipped with the tools necessary to avoid any negative repercussions from being part of the LGBTQ community and subjected to bullying. The present study aims to understand the role of resilience in driving mental health outcomes in this vulnerable population. The participants included in this research faced two challenges, being bullied and being a member of this sexual minority: this chapter will explore why some individuals have good outcomes *despite* both these challenges. The logic here is that hypothesised resilience factors will be highly visible in the group of individuals who, in spite of both challenges (LGBTQ and bullying), appear to have enjoyed a positive mental health outcome.

Aims

This study aims to understand the impact of putative resilience factors stigma-consciousness, perceived social support, and perceived resilience on mental wellbeing in bullied LGBTQ young people.

Hypotheses

1. LGBTQ adolescents, who have been bullied, will have poorer mental wellbeing compared to those who have not been bullied.
2. In those who are LGBTQ and have been bullied, better mental health outcomes will be linked to personal and social resilience [Greater perceived social support, lower stigma-consciousness, and higher *perceived* resilience].

Method

Sampling

Participants were recruited from LGBTQ groups in the West Midlands, University societies in England, via Twitter, Young Minds, and 6th form colleges in the West Midlands. Whilst recruitment took place predominantly in England, those who took part from outside of England were not excluded from the study.

Inclusion/Exclusion Criteria

Inclusion criteria: LGBTQ individuals, aged 16-25, were invited to take part in the study. There were no exclusion criteria.

Recruitment

Contacts within organizations – such as staff members, group organizers, or managers – were sent an email explaining the details of the study, with a link to the questions. These contacts were then asked to distribute the link to young people; this way prospective participants had access to the link without their identity being known by the researcher. Twitter was also used to reach a wider audience of participants, with a link to the questionnaire being included in the tweet to these organisations.

Design

This was a cross-sectional study of bullied and non-bullied LGBTQ individuals aged 16-25. The independent variable for this study was the participants' bullying and LGBTQ status, with perceived social support, stigma consciousness, and perceived resilience as resilience mediators. The dependent variable for this study was the participants' mental wellbeing.

Procedure

The questionnaire was hosted by Google Forms, a survey tool that enabled the creation, customisation, and circulation of online questionnaires (See Appendix 13). Data was collected between March 2017 and November 2017.

At the start of the study, participants were greeted by a welcome page followed by an information sheet explaining details of the study, how to withdraw and remove their data, if necessary, and who to contact if they had any questions. Participants then completed the online consent form. Once participants had read the information page and given consent they were then invited to complete the measures. At the end of the questionnaire, participants were provided with the contact details of the researcher and supervisors, and they were also given mental health resources.

Ethics

Ethical approval was granted by the University of Warwick's Biomedical and Scientific Research Ethics Committee, with the reference number REGO-2016-1898 (See Appendix 12).

Materials

Participant information.

Participants were asked about their age, gender, sexual identity, living circumstances, employment/education status, and ethnicity before they completed the measures (See Appendix 14). Young people identifying as heterosexual or who preferred not to say were excluded from the data analysis; although recruitment was focused mainly on LGBTQ participants there were still participants who identified as heterosexual. Those who selected 'Other' were given a text box in which to write their answer. These questions had been taken from a report by the Office for National Statistics (Joloza et al., 2010)

Bullying status.

Participants were asked 'Have you ever been bullied because of your sexual identity? Yes/No'. This was guided by methodology used in previous research which also categorised bullied LGBTQ participants (McCormick, 2016; Kosciw et al., 2016). In order to validate this dichotomous question, a measure assessing levels of homophobic name-calling was also used.

The Homophobic Content Agent Target Scale (HCATS) (Poteat & Espelage, 2005).

This scale assessed the participant's experience of homosexual name-calling. This 10-item, self-report measure used a 5-point Likert scale from 1 (never) to 5 (7 or more times). The HCATS had two subscales. The first asked if the participant has called other people homophobic names (Agent), for example '*Some kids call each other names such as gay, lesbo, fag etc. How many times in the last week did you say these things to a friend?*'. The second subscale asked if the participant has been called homophobic names (Target), for example '*Some kids call each other names such as gay, lesbo, fag etc. How many times in the last week did the following people call you these things?*'. Both subscales had a Cronbach's alpha of 0.80 (Poteat & Espelage, 2005). Each scale was totalled, scores for each scale ranged from 5 to 25. Higher scores on the Agent subscale suggested a higher use of homophobic names by the participant; higher scores on the Target subscale suggested more experiences of the participant being called these names.

Mental well-being.

The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) (Tennant et al., 2007).

This scale was used to assess the mental well-being of participants, it was positively worded and focused on positive thoughts and feelings. Research has found this scale to be an effective way in which to measure mental well-being (Maheswaran et al., 2012). This 14 item self-report measure focused on the last two weeks, and used a Likert scale of 1 (Rarely) to 5 (All of the time). The scale had a Cronbach's alpha of 0.89; and a test-retest reliability of 0.83 (Tennant et al., 2007). The score from each answer was totalled and the higher the score, the

more mental well-being the participant had. The scores ranged from 14 to 70. An example question is *'I've been feeling useful'*.

Perceived resilience.

The Brief Resilience Scale (Smith et al., 2008).

This scale assessed the individual's perceived resilience; and their ability to 'bounce back' from adversity. This 6-item, self-reported measure used a Likert scale of 1 (Strongly disagree) to 5 (Strongly agree). This scale measured resilience in general, not specifically for those who have been bullied or are part of the LGBTQ community. The scale had a Cronbach's alpha of 0.80-0.91; and a test-retest reliability of 0.69 (Smith et al., 2008). This scale has previously been associated with psychological distress, stigma, and well-being (Lyons, Hosking, & Rozbroj, 2015). This measure has also been negatively correlated with anxiety, depression, and negative affect (Kemper, Mo, & Khayat, 2015). A higher score was associated with higher levels of resilience. The scores for this scale ranged from 6 to 30; the total score was then divided by 6 to give a final range of 1 to 5. An example question is: *'I tend to bounce back quickly after hard times'*.

Stigma-consciousness.

The Stigma-Consciousness Questionnaire for Gay Men and Lesbians (Pinel, 1999).

This scale was used to assess how conscious the individual was of stigma towards them. This 10-item, self-report measure used a Likert scale of 0 (Strongly disagree) to 6 (Strongly agree). For this research, the wording had been altered to include all sexual identities, rather than just gay men and lesbians. The scale had a Cronbach's alpha of 0.81, and a test-retest reliability of 0.76 (Bond et al., 2007). A higher score implied a higher level of stigma-consciousness. The scores ranged from 10 to 70. An example question is *'Stereotypes about homosexuals have not affected me personally'*.

Perceived social support.

The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988)

This scale assessed the individual's perceived social support and how good they thought that support is. The scale was a 12-item, self-report measure and used a Likert scale of 1 (Very strongly disagree) to 7 (Very strongly agree). This scale had three subscales. The first measured the perceived support from their significant other, for example '*There is a special person who is around when I am in need*'. The second scale measured the perceived support from their family, for example '*My family really tries to help me*'. The third scale measured the perceived support from their friends, for example '*I can talk about my problems with my friends*'. The scale had a Cronbach's alpha of 0.88; with 0.91 for the significant other subscale, 0.87 for the family subscale, 0.85 for the friend subscale. The test-retest for the scale was 0.85; with 0.72 for the significant other subscale, 0.85 for the family subscale, 0.75 for the friend subscale (Zimet et al., 1988). The higher the score, the more social support was perceived by the participant. The scores for all 12 items ranged from 12 to 84; the total score was then divided by 12, giving a mean for all answers, and a final range of 1 (Low perceived social support) to 7 (High perceived social support).

Statistics

G*Power was used to determine the sample size for this study. An a priori power analysis indicated that 111 bullied LGBTQ participants were necessary to obtain 93% power for detecting an effect size of 0.3 with a α value of 0.05. When comparing bullied participants WEMWBS scale scores, using the sample average, sample size, standard deviation for sample, and α value of 0.05, the statistical power calculated by the DSS Research statistical power calculator was found to be 100%.

The participants used in this research were part of the LGBTQ community; therefore, the aim of this research was to explore the bullied individuals that nevertheless showed resilience and 'bounced back' without significant mental health difficulty. The hypothesised resilience factors of these 'resilient' individuals were investigated. For this particular question, any 'confounding' variables distinguishing, for example, those with good vs poor mental health outcomes may be intrinsic to their resilience and were not controlled for in the analysis testing the hypotheses; however, we investigated the extent to which these 'confounders' influenced the hypothesised resilience variables. For example, for the simple

comparison of WEMWBS scores between the bullied and non-bullied LGBTQ groups, we compared groups without controlling for 'confounding' variables. A one-way ANOVA was conducted for these comparisons.

For the second research question, a linear regression was conducted to determine whether these resilience factors predicted mental wellbeing in the bullied LGBTQ group alone, and then later controlled for potential confounders, including age and gender.

Results

The Sample

A total of 418 participants completed the questionnaire; however, 58 participants were removed from the analysis as they fell outside the 16-25 age range. Similarly, 73 participants, who were within the age range, were subsequently excluded from the data as they did not identify as part of the LGBTQ community (Table 14.). This left a final sample size of 287 participants.

Table 14. Descriptive data of included and excluded participants

		'Bullied'	'Not Bullied'	Total
Included	N	156	131	287
	Mean age	19.46	19.31	19.39
Excluded	N	13	60	73
	Mean age	18.00	17.05	17.22

Note: values are rounded to two decimal places

Table 15. shows the mean, standard deviation, and median scores for each of the measures for the 287 participants in the study.

Table 15. Descriptive statistics of the sample, including 'bullied' and 'not bullied' groups (N)

	'Bullied' (156)	'Not Bullied' (131)	Total (287)
Agent (HCATS) mean (SD)	6.16 (1.882)	5.95 (1.410)	6.06 (1.684)
Agent (HCATS) median	5.00	5.00	5.00
Target (HCATS) mean (SD)	7.69 (3.384)	6.50 (2.507)	7.15 (3.068)
Target (HCATS) median	6.00	6.00	6.00
WEMWBS (SD)	37.64 (10.051)	45.18 (9.873)	41.08 (10.639)
WEMWBS median	38.00	46.00	41.00
Perceived resilience mean (SD)	2.49 (.828)	2.96 (.774)	2.71 (.836)
Perceived resilience median	2.42	3.00	2.67
SC mean (SD)	45.10 (10.316)	36.50 (10.552)	41.17 (11.254)
SC median	45.00	37.00	42.00
Perceived Support mean (SD)	4.53* (1.298)	5.15* (1.217)	4.81* (1.298)
Perceived Support median	4.58	5.50	5.00

Note: S.C. = Stigma-Consciousness

The *target* subscale of the Homophobic Content Agent Target Scale (Poteat & Espelage, 2005) was used to validate the dichotomous question of individuals' self-identification as bullied or non-bullied. Not everyone will have interpreted bullying in the same way, and it is the interpretation and the individual's experience that will have triggered the negative repercussions of bullying within the individual. Whilst some participants may have interpreted an action against them as bullying, others may not; therefore, it is important that we established whether the individual felt they have been bullied or not. In order to do this, a one-way ANOVA compared the target subscale means for those who were bullied and non-bullied.

Table 16. Target subscale of the HCATS scale comparing self-identified bullied (N) and non-bullied participants (N)

	'Bullied' (156)	'Not Bullied' (131)
Target (HCATS) mean (SD)	7.69 (3.38)	6.50 (2.51)

Note: values are rounded to two decimal places

For the *target* subscale (Table 16.), as expected, the mean for the bullied group (7.69; SD 3.38) was higher than the non-bullied group (6.50; SD 2.51); this difference was highly significant ($F(1,280)=11.637, p<.005$) with an effect size (Cohen's d) of 0.40 [the Levene's Statistic was significant, so the Welch's Statistic was reported].

Hypothesis 1: LGBTQ Adolescents, who Have Been Bullied, Will Have Poorer Mental Wellbeing Compared to Those Who Have Not Been Bullied

A one-way ANOVA was conducted to compare the mental wellbeing of the bullied and non-bullied groups. The mean WEMWBS scores (Table 15.) for the bullied group (37.64; SD 10.05) was lower than for the non-bullied group (45.18; SD 9.87); this difference was also significant ($F(1,285)=40.66, p<.001$) with a medium effect size (Cohen's d) of 0.76.

Hypothesis 2: In Those Who Are LGBTQ and Have Been Bullied, Better Mental Health Outcomes Will Be Linked to Personal and Social Resilience [Greater perceived social support, lower stigma-consciousness, and higher *perceived* resilience]

A linear regression was conducted to determine the extent to which the resilience factors predicted mental wellbeing for bullied and LGBTQ individuals. Therefore, this analysis of the bullied group, who were previously identified as having poorer wellbeing, explored whether the resilience factors predicted wellbeing outcomes in this population.

The regression equation (Table 17.) was significant: $F(3,152)=42.89$, $p<0.001$, with an R^2 of .458. The standardized beta for perceived resilience (.476, $p<0.001$) and perceived support (.367, $p<0.001$) were statistically significant.

Table 17. Perceived resilience, stigma-consciousness, and perceived support as predictors of mental wellbeing in bullied LGBTQ individuals

N=156	B	SE B	β	Sig.
Perceived resilience	5.780	.783	.476	.000
Stigma-Consciousness	.055	.062	.057	.375
Perceived Support	2.845	.507	.367	.000

To control for potentially 'confounding' variables, age, gender, living circumstances, employment status, and ethnicity were added into the linear regression to determine if their presence altered the influence of these resilience factors (Pourhoseingholi et al., 2012), also known as a moderator analysis.

The regression equation (Table 18.) was significant: $F(8,147)=17.117$, $p<0.001$, with an R^2 of .482. The standardized beta for resilience (.468, $p<0.001$) and perceived support (.367, $p<0.001$) remained statistically significant, therefore unaffected by the introduction of the confounding variables.

Table 18. Perceived resilience, stigma-consciousness, and perceived support as predictors of mental wellbeing (WEMWBS) in bullied LGBTQ individuals controlling for confounders: age, gender, living circumstances, employment status, and ethnicity

N=156	B	SE B	β	Sig.
Perceived resilience	5.676	.793	.468	.000
Stigma-Consciousness	.050	.063	.051	.425
Perceived Support	2.840	.513	.367	.000
Age	.381	.262	.095	.149
Gender	-.070	.200	-.021	.726
Living Circumstances	.499	.749	.043	.507
Employment Status	-.661	.710	-.060	.353
Ethnicity	.103	.072	.089	.156

In summary, consistent with the hypotheses, this analysis revealed that perceived resilience and perceived social support diminished the impact of being an LGBTQ individual with a history of being bullied, on mental wellbeing. The findings presented in this chapter suggest that perceived resilience and perceived social support were associated with higher levels of resilience, for this vulnerable population.

Discussion

The purpose of this chapter was to determine the extent to which perceived resilience, perceived social support, and lower stigma-consciousness mitigate the impact of being bullied in the context of being a LGBTQ adolescent. Also, this research aimed to determine whether bullied LGBTQ adolescents will have poorer mental wellbeing than those who have not been bullied. In line with the hypotheses, bullied LGBTQ adolescents reported poorer mental wellbeing; and for those bullied participants, better mental health outcomes were linked to personal and social resilience. Therefore, the psychosocial dimensions of resilience in this population mitigate the consequences of being bullied and part of the LGBTQ community, both of which have been found to increase the likelihood of mental health problems.

These findings are in line with current literature, including Meyer's (2003) Minority Stress Model which argued that perceived social support was a moderator for minority stress; and Prince-Embury's (2014) three-factor personal resilience model, which includes a Sense of Mastery. Resilience within this group relied on the community around them to provide support, but also for the individual to believe they can bounce back from adversity.

There is limited research specifically exploring resilience factors for bullied LGBTQ adolescents; the majority of research has previously focused on bullying incidents and prevalence within this population. This research has worked to establish resilience factors for this population, which may ultimately inform necessary interventions for this group.

Methodological issues

External validity.

This population was taken from a range of societies and organisations across England and is a heterogeneous sample. There were no exclusion criteria for this research. There is a possibility that those with bad experiences of bullying may have refused to take part; alternatively, the anonymity that is provided by online questionnaires may have encouraged more adolescents to take part

compared to if the questionnaire was done face-to-face. As the questionnaire reached participants via emails and social media, it is impossible to tell how many participants were approached and *declined* to take part, however the statistical power is high for the sample.

Internal validity.

Each measure is valid and reliable, as discussed in the Methods section. Similarly, the dichotomous bullying question was validated by HCATS. To decrease the chance of experimental fatigue, the questionnaires were kept short, less than 20 minutes.

Implications

By believing that participants can bounce back and believing people are there to help are key resilience factors in this population. The presence of societies at university and GSA groups in schools may be instrumental in providing social support for these individuals. The findings in this research support the purpose of these groups.

Stigma consciousness was not found to be a resilience factor for this group. After comparing the stigma consciousness of the bullied and non-bullied groups, bullied participants had significantly higher stigma consciousness. This could be because those bullied as a result of their sexual identity may be reminded of stigma more frequently than non-bullied participants.

Further research could explore more potential resilience factors that this research was unable to include, such as: peer networks or self-esteem. Future research could also explore participants' bullying experiences in more detail.

Discussion

The research within this thesis endeavoured to understand the concept of resilience from the perspective of adolescents as they dealt with major life challenges. This discussion will reflect upon the thesis as whole, summarising what the research reveals, the implications of these findings, and how they contribute to the literature discussed in Chapter 2.

Resilience

As outlined in the literature review, we defined resilience as individuals having a good outcome despite experiencing significant adversity (Masten, 2001; Rutter, 2006). The concept of resilience is that certain characteristics or factors could have assisted adolescents in surviving adversity. Not all adolescents bounced back from difficulty with good mental wellbeing, but the ones that did provided us with the necessary information of how to promote good outcomes for future adolescents. The characteristics that these survivors possessed provided them with the necessary skills to endure the stress of these challenges. However, not all challenges will require identical resilience factors. Therefore, two different challenges were explored, which were found to operationalise resilience differently. One challenge provided a resilience-building experience and the other revealed those who flourished in the face of adversity to uncover key resilience factors. This has previously been mentioned in the Logic Model (p28).

Those with poor resilience will struggle to cope with stress, which will then lead to a strain on their mental wellbeing which could result in mental health problems. Poor resilience could mean that future challenges will also put a strain on the individual's mental health. Those with poor resilience do not possess the positive, nurturing characteristics associated with resilience. It has been established that the age of onset for the majority of mental health problems is during adolescence, and most of these have the potential to persist into adulthood. Therefore, by promoting resilience in this age group, the onset of mental health problems may be avoided. In order to determine what helps or hinders resilience in young people, the specific characteristics need to be explored thoroughly in each adolescent group as they face their own challenges.

Much research has focused on the causes or risk factors which may test resilience and have consequences for mental health, aspects which cause mental health problems rather than protect from them. Young people who are resilient will cope with the stress caused by major life challenges. Therefore, once resilience factors have been determined, they can be translated into a universal or targeted prevention strategy. These strategies will hinder the onset and development of mental health disorders, the potential lifetime mental wellbeing of the targeted individuals will be protected. The scoping review findings showed that there are many different interventions available for schools to use for anxiety and bullying prevention. The majority of these interventions focused on school-based activities, including CBT strategies and group work, which involved either the whole school or whole year-groups. The inclusive nature of these interventions ensured that those who were struggling did not feel singled out, which could have perpetuated any problems. Those not struggling were taught strategies to help if they needed them in the future, and also provided insight into the experiences of those who were struggling. Therefore, a whole year group approach would be best to support the development of resilience to school transition, especially as this challenge occurred in unison for the year group moving schools. For bullied LGBTQ adolescents, a whole school approach would be the best strategy to reduce bullying and also increase LGBTQ support.

Resilience was influenced by both the factors internal and external to the individual. Fergus and Zimmerman (2005) categorized these factors as assets (internal) and resources (external) that were available to the individual. These factors worked together within the individual for them to utilise either successfully or unsuccessfully during times of stress. The research aimed to determine how the challenges of school transition, bullying, or sexual minority influenced adolescents; their social identity, self-belief, and their sense of belonging had the potential to stop any negative outcomes as a result of these adversities. The results of this research found the internal asset of attachment security and the external resources of peer interactions and social identity to be associated with lower interpersonal worry during transition. For bullied LGBTQ adolescents, the internal asset of self-belief and external resource of social support were associated with better mental wellbeing. Therefore, the dual support available to the individual both internally and externally was found to be a key factor in promoting resilience during times of stress. Interestingly, these factors had the potential to confer resilience for both of

these very different adolescent groups, who faced different and unique challenges. By determining what can assist adolescents as they navigate certain life challenges at different stages of adolescence, specific help can be given to promote these factors. This can be done through intervention design, by targeting individuals and working with them to build and maintain important characteristics they will be well-equipped to face these challenges. This research previously suggested that school transition was an example of the compensatory model, as pupils would use resources to protect themselves from the negative impact of school transition. However, as the results showed that anxiety and worry decreased following transition, this experience was instead a 'bounce forward' rather than a bounce back, in terms of their resilience. Therefore, pupils experienced the challenge model instead of the compensatory model; this experience was an opportunity for pupils to practise employing their skills and utilise their resources for then they faced larger and more unpredictable challenges in the future. These 'bounce forward's and practice challenges are an opportunity for adolescents to prepare themselves for struggles they will face as they grow older and are, therefore, an important part of resilience building.

The research found evidence to suggest the presence of a positive association between perceived social support and wellbeing. This finding echoed the suggestion that, opposingly, insecure attachments were more likely to lead to social anxiety, explored in the school transition study. An individual's identity within their society could influence how they process and cope with life challenges. A strong sense of belonging within their social context may promote resilience for young people; however, some challenges might disrupt their sense of belonging, for example, when a young person is required to move environments much like when pupils transition from primary school to secondary school. Those who have a firm sense of belonging and strong social links are, therefore, more likely to survive the stress of these challenges and emerge with good outcomes. Potential resilience models were discussed in the literature review which support the notion that both self-belief and social factors are key to adolescent resilience. The Three Factor Model (Pince-Embury, 2014) argued that resilience is made up of self-belief (Sense of Mastery), relationships (Sense of Relatedness), and emotional responses (Emotional Reactivity). Similarly, Worsley's Resilience Doughnut (2006) is comprised of an inner circle and an outer 'doughnut'. The inner circle contains internal aspects of the individual's self-belief ('I can, I am, I have'), whilst the outer

ring contains external aspects pertaining to the individual, which include relationships with parents, peers, family and identity, and their community. Both these models highlight the importance of self-belief and social factors for promoting resilience in these populations.

Adolescent Groups

Current literature has not thoroughly explored resilience for specific groups of adolescents and the challenges they have faced. There are a multitude of challenges that youths face throughout adolescence. Similarly, resilience may be different throughout adolescence, it is not a fixed characteristic and could change at different life stages or be influenced by an individual's experiences. This research specifically chose these two age groups to examine how they survive certain challenges; either school transition, bullying, or sexual minority.

Many school transition studies have taken place in different countries, where pupils move schools at different ages. These results might not be applicable to the UK school population, as pupils were at a different stage of adolescence when they transitioned compared to the pupils in research from other countries. Therefore, it is important to determine how resilience is built within pupils who move schools at age 11, which may differ to those who transition at 10, 12, or 14 years of age. Therefore, the appropriate interventions can be designed for the correct age groups from the resilience factors found, as outlined in the Logic Model (p28).

Contrastingly, in later adolescence, individuals encounter much different challenges to those in early adolescence. As these individuals grew, their experiences and choices separated them from their peers. Hopefully, these adolescents became more independent and were able to make decisions, which might have been influenced by their own resilience. Arguably, LGBTQ adolescents faced greater challenges than most, but current research focused on the risks and challenges this population faced, far more than the characteristics that helped or improved this groups' wellbeing.

This thesis studied those who recovered from different major life challenges and what factors aided their recovery from adversity. This approach

was derived from the definition of resilience used. The challenges faced at early adolescence – such as school transition – is something that most, if not all, adolescents experienced. This universal challenge is experienced by adolescents at an early age, possibly before these young people have settled on their own specific identity and before they have fully formed their view of the world. Young adolescents all experienced school transition, they faced this challenge as a year group and hopefully had the support of their peers and teachers during it. However, for some this support and the fact that they went through transition together was not enough to allay their fears and ensure a successful move to secondary school. Therefore, this research explored what characteristics or factors separated those who successfully transitioned with those who did not.

As adolescents grew, they formed their own unique identities and learned more about their own personalities and preferences. Therefore, these older adolescents may have felt they had more to protect, they had more of an inclination of who they were and where they fitted in the world. This sense of individuality provided adolescents with more independence but could have also resulted in more challenges specific to them. Not all older adolescents faced the same challenges as they grew, it is due to their experiences, some through choice but not all, that put them on their own specific path. These individuals were unlikely to face exactly the same challenges as a year group and therefore needed their own specific characteristics and factors to aid them in their personal challenges. Therefore, bullied LGBTQ adolescents were explored to try and determine resilience factors in later adolescents. The challenges of these two groups were unique and we expected the resilience for these groups to work very differently, and therefore required different resilience factors.

Whilst these groups were very different in age and the challenges that they faced, this research aimed to determine the resilience themes for these groups. This thesis explored whether the resilience factors found for these groups were similar or specific to the groups' age and context. As outlined in the Logic Model (p28), once these factors were determined from those who flourished, appropriate interventions could be devised for these adolescents.

Implications

Future research needs to continue to unpack the complexities of resilience within adolescent populations. Adolescents encounter a multitude of challenges whilst trying to navigate the difficult process of growing up, both physically and mentally. Adolescents face adversity before they know who they will be as adults or where they fit in the world. Therefore, it could be thought that adolescents crave social stability, which can be found through social support and finding their place within the social fabric of their peers. Future research could explore their need for social acceptance and social identity more thoroughly. This could be done through exploring how adolescence think they fit into society, how important this is to them, and how they can improve their social identity. As this research successfully determined these resilience factors for this population from all the other themes that were investigated, that meant these specific themes were not explored as thoroughly as possible. Whilst future research could dissect these themes more deeply, it is unfortunate that this research was not able to fully discover the intricacies of these themes within this population

These findings could inspire interventions for these populations, the intervention strategies used could be derived from the scoping review findings, previously discussed. For early adolescents, such interventions could include whole year group interventions to support pupils and prevent anxiety about transition whilst at primary school. These pupils could take part in group work and CBT based activities to focus on interpersonal worry during transition, as this was found to influence how well pupils settled into secondary school. These interventions could concentrate on allaying pupils' worries regarding the social aspects of transition, such as making friends and meeting teachers. Schools could work to introduce pupils to teachers early on before they transition. Schools could also group pupils who are going to the same school together, pupils would then recognize a few of their peers once secondary school has started.

For older adolescent populations, building on the themes made evident within this research, interventions could be designed to prevent bullying and encourage team building between peers from an early age, these activities could help pupils to feel part of their year group and establish their own social identity. To promote social support for LGBTQ adolescents in particular, a whole school

approach may be most effective, to encourage support from non-LGBTQ adolescents and promote an environment free from bullying for all pupils. This would provide LGBTQ individuals with a sense of belonging amongst their peers, helping them to feel part of the social fabric of their school. Similarly, the presence of support groups in schools and universities is backed up by these findings, as they provide social support to vulnerable populations.

Overall, this research ascertains that self-belief is an important aspect of adolescence and is important with regard to engendering resilience, by providing adolescents with a belief that they can achieve and are capable of facing challenges is integral to their resilience process. Interventions can be designed with this in mind, adolescents can be given activities that prove their capabilities, yet slowly challenge them by increasing in difficulty each time. This gradual increase can encourage participants to complete the challenges and as they would have successfully completed a slightly easier challenge previously, they would hopefully be enthusiastic and willing to undertake the new challenge. The end goal that participants work towards can be chosen by participants, and the professional running the intervention could work with participants to implement activities that gradually lead to the chosen end goal.

Limitations

There were several limitations present in this research. Firstly, the school study limitations will be discussed. Data collection in the school study could have been improved by collecting data over a longer period of time, thereby providing a more comprehensive understanding of these participants during transition. A larger sample size would also have enabled a broader comprehension of the population as a whole. Despite the statistical power being acceptable, the number of participants was lower than desired. Informed consent was required from both parents and pupils before questionnaires could be completed. Therefore, parents were approached in a variety of ways, to ensure contact was made with as many parents as possible. Contacting parents and approaching them about the study was a difficult and time-consuming process as they were contacted via the primary school. Previous research conducted in schools has recruited participants using presumed consent, as the school acts *in loco parentis*, which many schools have been comfortable with. It is possible that using presumed consent would have

resulted in a greater number of participants. Similarly, as the sample was only recruited from the West Midlands it cannot be determined if these findings are generalisable of the UK as a whole. Interestingly, environmental issues were not associated with anxiety during school transition in the quantitative analysis. However, the qualitative analysis found that pupils' who reported concerns regarding the work were associated with higher pre-transition trait anxiety scores, as opposed to the interpersonal issues reported, such as: social concerns (see Appendix 11). These contrasting findings may be due to the difference in data collection approach, it cannot be ignored that the quantitative environmental and interpersonal scales are thoroughly and widely used to measure worries during school transition, whereas the open-ended questions simply asked what concerns pupils had regarding school transition. However, there is value in receiving unguided responses from pupils, they produced these responses away from any scales and answer prompts which indicated how they were really feeling.

The research involving LGBTQ adolescents also presented limitations. Despite the acceptable statistical power, as with the previous findings, the study would have benefited from a larger sample size. Time was allocated to each aspect of the study fairly, but to ensure the study as a whole was completed in a timely fashion, recruitment and data collection needed to end so that the next part of the research, analysis and the interpretation of the results, could commence. Due to the online nature of the questionnaire 'study conditions' could not be guaranteed; however, in order to reach a large, diverse sample of participants it was decided that this was the best option for data collection. By asking participants about experiences that have already happened to them, their memory of having been bullied or not may have altered over time which might influence the number or severity of bullying experiences reported by participants. Whilst the data collection included some potential confounding variables, this did not include any diagnoses that might influence their self-belief or perception of social support, such as anxiety or depression.

In retrospect, there was an inconsistency in how bullying has been conceived in these two studies. This research argued that bullying was a challenge, a life event. This was made clear in the Logic Model on p28 and was commented on in the discussion of Chapter 6. However, in the CatPCA analysis, it was noted that the absence of bullying was correlated with positive social

relationships, despite previous research suggesting that bullying is a risk factor for mental health in adolescence. Therefore, whilst the absence of bullying does confer resilience for this research, it is illogical in the face of previous research that views bullying as a danger to adolescent mental health and in the other research conducted within this thesis.

All data was collected through self-report measures, which exposed the research to potential response bias from participants. However, as the results found a high proportion of pupils to have anxiety in the school study and bullying experiences in the study on LGBTQ adolescents, it is unlikely that the results were affected by participants hiding the more socially undesirable answers to questions.

Conclusions

The research findings suggest that self-belief and social factors have the greatest influence on resilience during adolescence. These social factors include feelings of belonging, social support, social identity, and being a part of the social hierarchy. The research findings support social rank theory, which has been discussed previously in this thesis (Gilbert, 2002). Feeling safe in their environment, which could be due to social support available for LGBTQ individuals, allows these adolescents to adopt a positive relaxed attitude rather than a negative, defensive one. Similarly, feeling as though they are part of the social fabric and belonging to the group around them allows adolescents to cope with stress when their environment changes, such as moving from primary school to secondary school.

This discussion reflected upon the research in its entirety and each individual study, including future research directions and study limitations. The research contributes to the growing knowledge base of resilience, as outlined in the Literature Review, and explores resilience in the context of anxiety cognitions (Wells, 1995), social rank (Gilbert, 2002), the compensatory model of resilience (Fergus & Zimmerman, 2005), and minority stress (Meyer, 2003). This thesis provides a greater understanding of resilience within adolescent mental health, in a variety of high-risk groups; and supports the previous arguments that resilience factors provide individuals with the skills and strategies required for their specific challenge. There is scope for positive interventions to be derived from this research

and the findings support current interventions already in place. This thesis highlights how resilience differs between groups, depending on the demands of the challenges faced and what specific individuals need to employ to survive these challenges. The findings within this research agree with and support previous research conducted in the field of resilience (Goldstein & Brooks, 2012; Zimmerman et al., 2013).

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Appendix 1

Search Strategy

An example of the search strategies used:

1. Anxiety or Anxious
2. Schools or Primary School or Secondary School
3. Bullying or Victimization
4. Intervention

A mix of one word from 1, 2, 3 and 4 was used for each search until all options are used.

Appendix 2



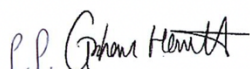
These other approvals may include, but are not limited to:

1. Any necessary agreements, approvals, or permissions required in order to comply with the University of Warwick's Financial Regulations and Procedures.
2. Any necessary approval or permission required in order to comply with the University of Warwick's Quality Management System and Standard Operating Procedures for the governance, acquisition, storage, use, and disposal of human samples for research.
3. All relevant University, Faculty, and Divisional/Departmental approvals, if an employee or student of the University of Warwick.
4. Approval from the applicant's academic supervisor and course/module leader (as appropriate), if a student of the University of Warwick.
5. NHS Trust R&D Management Approval, for research studies undertaken in NHS Trusts.
6. NHS Trust Clinical Audit Approval, for clinical audit studies undertaken in NHS Trusts.
7. Approval from Departmental or Divisional Heads, as required under local procedures, within Health and Social Care organisations hosting the study.
8. Local ethical approval for studies undertaken overseas, or in other HE institutions in the UK.
9. Approval from Heads (or delegates thereof) of UK Medical Schools, for studies involving medical students as participants.
10. Permission from Warwick Medical School to access medical students or medical student data for research or evaluation purposes.
11. NHS Trust Caldicott Guardian Approval, for studies where identifiable data is being transferred outside of the direct clinical care team. Individual NHS Trust procedures vary in their implementation of Caldicott guidance, and local guidance must be sought.
12. Any other approval required by the institution hosting the study, or by the applicant's employer.

There is no requirement to supply documentary evidence of any of the above to BSREC, but applicants should hold such evidence in their Study Master File for University of Warwick auditing and monitoring purposes. You may be required to supply evidence of any necessary approvals to other University functions, e.g. The Finance Office, Research & Impact Services (RIS), or your Department/School.

May I take this opportunity to wish you success with your study, and to remind you that any Substantial Amendments to your study require approval from BSREC before they may be implemented.

Yours sincerely



Professor Scott Weich
Chair
Biomedical and Scientific
Research Ethics Sub-Committee

**Biomedical and Scientific Research
Ethics Sub-Committee**

A010 Medical School Building
Warwick Medical School,
Coventry, CV4 7AL.

T: 02476-528207

E: BSREC@Warwick.ac.uk

http://www2.warwick.ac.uk/services/ris/research_integrity/researchethicscommittees/bio-med

Appendix 3



Study Number: 1

Patient Identification Number for this study:

Title of Project: The Impact of the Transition from Primary School to Secondary School on Young Adolescents

Name of Researcher(s): Charlotte Fontaine, co-supervised by Max Birchwood and Charlotte Connor

Please can you fill out this form and return it to your school

Please initial all boxes

1. I have read and understand the information sheet dated **[18/11/15]** for this study. I have thought about the information, and any questions I've asked have been answered. ☐
2. I understand that I am volunteering to take part and I can stop at any time without giving any reason, without my education being affected. ☐
3. I understand that some of the questions I answer may be looked at by individuals from the University of Warwick and staff from my school where it is relevant to my taking part in this research. I give permission for these individuals to see my answers. ☐
4. I agree to take part in the study, and at two follow-ups. ☐

Name of Participant

Date

Signature

Name of Person
taking consent

Date

Signature



Study Number: 1

Patient Identification Number for this study:

Title of Project: The Impact of the Transition from Primary School to Secondary School on Young Adolescents

Name of Researcher(s): Charlotte Fontaine, co-supervised by Max Birchwood and Charlotte Connor

Please can you fill out this form and return it to your school

Would you like your child to participate in this research?

Please circle Yes/No

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated **30.11.15** for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my child's participation is voluntary and that they are free to withdraw at any time without giving any reason, without their education being affected. ☐
3. I understand that relevant sections of the data collected during the study may be looked at by individuals from the University of Warwick and the appropriate employees from my school where it is relevant to my taking part in this research. I give permission for these individuals to have access to my responses. ☐
4. I agree for my child to take part in the study, and at two follow-ups. ☐

Name of Parent

Date

Signature

Name of Child

Appendix 4



Study Title: The Impact of the Transition from Primary School to Secondary School on Young Adolescents

Investigator(s): Charlotte Fontaine

Introduction

You are invited to take part in a research study. Before you decide, you need to understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully. Talk to others about the study if you wish.

(Part 1 tells you the purpose of the study and what will happen to you if you take part. Part 2 gives you more detailed information about the conduct of the study)

Please ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

PART 1

What is the study about?

This study aims to find out if moving from Primary school to Secondary school impacts upon pupils' anxiety, and what factors can help pupils through the transition process. This includes your wellbeing, how you feel about your school and your parents, how you get on with other pupils, how you feel about moving to secondary school and how your school prepares you for the move from Primary school to Secondary school, ie taster days.

Do I have to take part?

It is entirely up to you to decide. We will describe the study and go through this information sheet, which we will give you to keep. You will be free to stop taking part at any time, without giving a reason and this will not affect you or your circumstances in any way.

What will happen to me if I take part?

You will be asked to complete questionnaires about yourself on paper, and answer questions asked by the researcher. You will do this individually, or in small groups, under the supervision of the researcher at your school.

What are the possible disadvantages, side effects, risks, and/or discomforts of taking part in this study?

There are a lot of questions to answer; so you can take a break part of the way through, if you want to. Also, if you need any help, a Teaching Assistant will be supplied by the school.

If any of the questions worry you, or you get worried or upset from taking part in this study, you or your parent can talk to the teachers and contact the researcher or supervisors:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@bsmhft.nhs.uk

Or visit the youth space website: <http://www.youthspace.me/> which has help for both parents and children.

What are the possible benefits of taking part in this study?

This study aims to find out what helps pupils with their move from Primary school to Secondary school. So that schools will have more information about how to prepare pupils for the move.

Expenses and payments

There will be no payment for participating.

What will happen when the study ends?

Electronic copies of the data from this study will be kept securely and anonymously at the University of Warwick for 10 years.

Will my taking part be kept confidential?

Yes. We will follow strict ethical and legal practice and all information about you will be handled in confidence. Further details are included in Part 2.

What if there is a problem?

Any complaint about the way you have been dealt with during the study or any possible harm that you might suffer will be addressed. Detailed information is given in Part 2.

This concludes Part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2

Who is organising and funding the study?

This study is being done by a student researcher from the University of Warwick, who will be supervised by an experienced professor.

What will happen if I don't want to carry on being part of the study?

Taking part in this study is entirely voluntary. If you don't want to participate, it will not affect you in any way. If you decide to take part in the study, you will need to sign a consent form, which states that you have given your consent to participate.

If you agree to participate, you may still withdraw from the study at any time without it affecting you in any way.

You have the right to withdraw from the study completely and decline any further contact by study staff after you withdraw.

Withdrawal from the study will not affect your grades in any way.

What if there is a problem?

This study is covered by the University of Warwick's insurance and indemnity cover. If you have an issue, please contact the Chief Investigator of the study:

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Who should I contact if I wish to make a complaint?

Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:

Director of Delivery Assurance

Registrar's Office

University House

University of Warwick

Coventry

CV4 8UW

Complaints@Warwick.ac.uk

024 7657 4774

Will my taking part be kept confidential?

All the answers will be kept confidential, this means no one will see your

answers apart from the researcher, supervisors and, if necessary, your school. You will be given a random number that has no obvious connection with you in order to keep your responses confidential. The researcher and their supervisor will have access to the anonymised data, which will be stored securely at the South Birmingham and Solihull NHS Trust. Anonymised data means that your responses will be put with your random number, not your name.

What will happen to the results of the study?

The results of the data will be presented in the researcher's project and the schools involved will also be made aware of the findings. The study will be submitted to journals for publication, and the schools will be notified of this. This means the results of the study will be available to the public, but your answers will still be anonymous.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the University of Warwick's Biomedical and Scientific Research Ethics Committee (BSREC):
REGO-2015-1686 18/11/15

What if I want more information about the study?

If you have any questions about any aspect of the study, or your participation in it, not answered by this participant information leaflet, please contact:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@bsmhft.nhs.uk

Thank you for taking the time to read this participant information leaflet.



Study Title: The Impact of the Transition from Primary School to Secondary School on Young Adolescents

Investigator(s): Charlotte Fontaine

Introduction

Your child is invited to take part in a research study. Before you decide, you need to understand why the research is being done and what it would involve for your child. Please take the time to read the following information carefully. Talk to others about the study if you wish.

(Part 1 tells you the purpose of the study and what will happen to your child if they take part. Part 2 gives you more detailed information about the conduct of the study)

Please ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish your child to take part.

PART 1

What is the study about?

This study aims to find out if moving from Primary school to Secondary school impacts upon pupils' anxiety, and what factors can help pupils through the transition process. This includes their wellbeing, any transition anxiety, how they feel about their school and their parents, how they get on with other pupils, how they feel about moving to secondary school and how the school's prepare pupils for the move from Primary school to Secondary school, ie

taster days.

Do I have to take part?

It is entirely up to you to decide. We will describe the study to your child before it begins and go through a child-version of this information sheet, which we will give them to keep. You and your child will be free to withdraw at any time, without giving a reason and this will not affect you or your child in any way.

What will happen to me if I take part?

Your child will be asked to complete questionnaires about his or herself on paper, and answer questions asked by the researcher. They will do this individually or in small groups, under the supervision of the researcher at their school. The questions used in this project are designed for children to answer.

What are the possible disadvantages, side effects, risks, and/or discomforts of taking part in this study?

There are a lot of questions to answer; so, if necessary, your child can take a break part of the way through or complete the questionnaires in two settings. Also, if your child requires any assistance, a Teaching Assistant will be supplied by the school.

If any of the questions worry you or your child, or either of you get worried or upset as a result of participating in this study, you or your child can talk to the teachers and contact the researcher or supervisors:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@bsmhft.nhs.uk

Or visit the youth space website: <http://www.youthspace.me/> which has sources of guidance for both parents and children.

What are the possible benefits of taking part in this study?

This study aims to find out what helps pupils with their transition from Primary school to Secondary school. Therefore, schools will have more information about how to ensure a smooth transition and how to prepare pupils for the move.

Expenses and payments

There will be no payment for participating.

What will happen when the study ends?

Electronic copies of the data from this study will be kept securely and anonymously at the University of Warwick for 10 years.

Will my taking part be kept confidential?

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What if there is a problem?

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This concludes Part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2**Who is organising and funding the study?**

This study is being conducted by a student researcher from the University of

Warwick, who will be supervised by an experienced professor.

What will happen if I don't want my child to carry on being part of the study, or my child doesn't want to carry on being part of the study?

Taking part in this study is entirely voluntary. If you or your child no longer want to participate, it will not affect you or your child in any way. If you or your child decide to take part in the study, you and your child will need to sign a consent form each, which states that you have given your consent for your child to participate.

If you agree for your child to participate, you may still withdraw your child from the study at any time without it affecting your child in any way.

You have the right to withdraw your child from the study completely and decline any further contact by study staff after your child withdraws.

Withdrawal from the study will not affect your child's grades in any way.

What if there is a problem?

This study is covered by the University of Warwick's insurance and indemnity cover. If you have an issue, please contact the Chief Investigator of the study:

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Who should I contact if I wish to make a complaint?

Any complaint about the way you or your child has been dealt with during the study or any possible harm you or your child might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:

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Registrar's Office

University House

University of Warwick
Coventry
CV4 8UW
Complaints@Warwick.ac.uk
024 7657 4774

Will my taking part be kept confidential?

All the data will be kept confidential, this means no one will see your child's answers apart from the researcher, supervisors and, if necessary, your child's school. Your child will be given a random number that has no obvious connection with them in order to keep their responses confidential. The researcher and their supervisor will have access to the anonymised data, which will be stored securely at the South Birmingham and Solihull NHS Trust. Anonymised data means that your child's responses will be put with their random number, not their name.

What will happen to the results of the study?

The results of the data will be presented in the researcher's project and the schools involved will also be made aware of the findings. The study will be submitted to journals for publication, and the schools will be notified of this. This means the results of the study will be available to the public, but your child's answers will still be anonymous.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the University of Warwick's Biomedical and Scientific Research Ethics Committee (BSREC):
REGO-2015-1686

What if I want more information about the study?

If you have any questions about any aspect of the study, or your child's participation in it, not answered by this participant information leaflet, please contact:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@bsmhft.nhs.uk

Thank you for taking the time to read this participant information leaflet.

Appendix 5

State-Trait Anxiety Inventory for Children - State

How do you feel right now? Choose one answer per number.

- | | | | |
|-------------|-----------------|------------|----------------|
| 1. I feel: | Very calm | Calm | Not calm |
| 2. I feel: | Very upset | Upset | Not upset |
| 3. I feel: | Very pleasant | Pleasant | Not pleasant |
| 4. I feel: | Very nervous | Nervous | Not nervous |
| 5. I feel: | Very jittery | Jittery | Not jittery |
| 6. I feel: | Very rested | Rested | Not rested |
| 7. I feel: | Very scared | Scared | Not scared |
| 8. I feel: | Very relaxed | Relaxed | Not relaxed |
| 9. I feel: | Very worried | Worried | Not worried |
| 10. I feel: | Very satisfied | Satisfied | Not satisfied |
| 11. I feel: | Very frightened | Frightened | Not frightened |
| 12. I feel: | Very happy | Happy | Not happy |
| 13. I feel: | Very sure | Sure | Not sure |
| 14. I feel: | Very good | Good | Not good |
| 15. I feel: | Very troubled | Troubled | Not troubled |
| 16. I feel: | Very bothered | Bothered | Not bothered |
| 17. I feel: | Very nice | Nice | Not nice |
| 18. I feel: | Very terrified | Terrified | Not terrified |
| 19. I feel: | Very mixed-up | Mixed-up | Not mixed-up |
| 20. I feel: | Very cheerful | Cheerful | Not cheerful |

State-Trait Anxiety Inventory for Children - Trait

Now choose how you usually feel. Choose one answer per number.

- | | | | |
|---|-------------|-----------|-------|
| 1. I worry about making mistakes: | Hardly ever | Sometimes | Often |
| 2. I feel like crying: | Hardly ever | Sometimes | Often |
| 3. I feel unhappy: | Hardly ever | Sometimes | Often |
| 4. I have trouble making up my mind: | Hardly ever | Sometimes | Often |
| 5. It is difficult for me to face my problems: | Hardly ever | Sometimes | Often |
| 6. I worry too much: | Hardly ever | Sometimes | Often |
| 7. I get upset at home: | Hardly ever | Sometimes | Often |
| 8. I am shy: | Hardly ever | Sometimes | Often |
| 9. I feel troubled: | Hardly ever | Sometimes | Often |
| 10. Unimportant thoughts run through my mind and bother me: | Hardly ever | Sometimes | Often |
| 11. I worry about school: | Hardly ever | Sometimes | Often |

12. I have trouble deciding what to do:			
	Hardly ever	Sometimes	Often
13. I notice my heart beats fast:			
	Hardly ever	Sometimes	Often
14. I am secretly afraid:			
	Hardly ever	Sometimes	Often
15. I worry about my parents:			
	Hardly ever	Sometimes	Often
16. My hands get sweaty:			
	Hardly ever	Sometimes	Often
17. I worry about things that may happen:			
	Hardly ever	Sometimes	Often
18. It is hard for me to fall asleep at night:			
	Hardly ever	Sometimes	Often
19. I get a funny feeling in my stomach:			
	Hardly ever	Sometimes	Often
20. I worry about what others think of me:			
	Hardly ever	Sometimes	Often

Appendix 6

Environmental School Transition Anxiety Scale

School transition is the movement from primary school to secondary school. Think about where you are now at in this transition.

Read each statement carefully. For each statement circle the BEST response about how you feel and think from the following options: '**Never** true about me', '**Rarely** true about me', '**Sometimes** true about me', '**Often** true about me' and '**Always** true about me'

	Never	Rarely	Sometimes	Often	Always
I worry about my class grades	1	2	3	4	5
I fear that I will fail my classes	1	2	3	4	5
I worry about forgetting my locker combination	1	2	3	4	5
I worry about being safe in my new school	1	2	3	4	5
I am scared that I will get lost in my new school	1	2	3	4	5
I worry about the amount of time needed to study for my classes	1	2	3	4	5
I worry about moving from one class to the next	1	2	3	4	5
I am concerned about getting too much homework	1	2	3	4	5
I am afraid of classroom tests	1	2	3	4	5
I am concerned about finding a place to sit to eat my lunch	1	2	3	4	5
I worry about crowded hallways of my new school	1	2	3	4	5
I worry about difficult classes	1	2	3	4	5
I am concerned about moving from one building to the next at my new school	1	2	3	4	5
I worry that my class work is not good enough	1	2	3	4	5

I worry about understanding the new rules of my new school	1	2	3	4	5
I am concerned about the size of my new school	1	2	3	4	5
I worry about going to the wrong class	1	2	3	4	5
I am concerned that I will have too many activities to choose from	1	2	3	4	5
I am afraid that I will be unable to find my locker	1	2	3	4	5

Appendix 7

Interpersonal School Transition Anxiety Scale

School transition is the movement from primary school to secondary school. Think about where you are now at in this transition.

Read each statement carefully. For each statement circle the BEST response about how you feel and think from the following options: '**Never** true about me', '**Rarely** true about me', '**Sometimes** true about me', '**Often** true about me' and '**Always** true about me'

	Never	Rarely	Sometimes	Often	Always
I worry about "fitting in" in my new school	1	2	3	4	5
I worry about my parents talking to other students' parents	1	2	3	4	5
I worry about what my teachers would expect of me	1	2	3	4	5
I am scared that no one will talk to me	1	2	3	4	5
I am concerned that my parents will help me less with my homework	1	2	3	4	5
I am concerned about what other students think about me	1	2	3	4	5
I am concerned about what my new teachers think about me	1	2	3	4	5
I am scared that my parents will treat me differently	1	2	3	4	5
I am concerned about getting the support I need from my parents	1	2	3	4	5
I worry about not being part of the "in" group	1	2	3	4	5
I am scared about getting pushed around by the other students	1	2	3	4	5
I worry about being alone	1	2	3	4	5
I worry about being teased by my classmates	1	2	3	4	5

I am afraid that other students will say bad things about me	1	2	3	4	5
I worry about having no friends	1	2	3	4	5
I am afraid that students in my school will not like me	1	2	3	4	5
I worry about getting hard teachers	1	2	3	4	5
I worry that my new teachers will embarrass me	1	2	3	4	5
I am nervous about meeting my new teachers	1	2	3	4	5
I worry that I will get less attention from my new teachers	1	2	3	4	5
I am afraid my new teachers will be strict	1	2	3	4	5
I am concerned that my new teachers will not like me	1	2	3	4	5
I am concerned that I wont be able to talk freely with my parents	1	2	3	4	5
I fear my teachers will scold me	1	2	3	4	5
I am afraid that my parents will give me less freedom	1	2	3	4	5
I worry about my parents talking to my teachers	1	2	3	4	5
I worry about having different teachers	1	2	3	4	5
I worry about making new friends	1	2	3	4	5
I worry about my parents participating less in my school events	1	2	3	4	5

Appendix 8

Psychological Sense of School Membership Scale

For each statement, say how much you agree with the sentence by choosing a number.

1. I feel proud of belonging to my primary school.

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

2. I am treated with as much respect as other students.

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

3. I feel very different from most other students here.

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

4. The teachers here respect me.

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

5. There's at least one teacher or other adult in this school I can talk to if I have a problem.

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

Appendix 9

Attachment Questionnaire for Children

Circle the paragraph that best describes you:

1) I find it easy to become close friends with other children. I trust them and I am comfortable depending on them. I do not worry about being abandoned or about another child getting too close friends with me.

or

2) I am uncomfortable to be close friends with other children. I find it difficult to trust them completely, difficult to depend on them. I get nervous when another child wants to become close friends with me. Friends often come more close to me than I want them to.

or

3) I often find that other children do not want to get as close as I would like them to be. I am often worried that my best friend doesn't really like me and wants to end our friendship. I prefer to do everything together with my best friend. However, this desire sometimes scares other children away.

Appendix 10

The Peer Interactions in Primary School Questionnaire

Tick one box for each statement

	A lot	Sometimes	Never
Other students make me cry			
I tease other students			
Other students take things from me that I do not want to give them			
I push or slap other students			
Other students look at me in a mean way			
I tell other students I will hit or hurt them			
At recess, I play by myself			
I say mean things about a student to make other kids laugh			
Another student tells me they will hurt me			
I make other students feel sad on purpose			
I am hit or kicked by other students			
I call other students bad names			
Other students tease me			
I am mean to other students			
Other students ignore me on purpose			
I hit or kick other students			
Other students make me feel sad			
I feel bad because I am mean to other students			
Other students make fun of me			
I want to stay home from school because students are mean to me			
I give other students mean or "dirty" looks			
Other students leave me out of games on purpose			

Appendix 11

Further School Transition Analyses

Gender Differences and Anxiety

The gender breakdown of anxiety levels in this sample at pre- and post-transition can be seen in Table 19.

ANOVAs were conducted comparing state and trait anxiety at both pre- and post-transition in terms of gender. At pre-transition the mean for females' state anxiety score (30.09; SD 6.013) was higher than for males (28.16; SD 5.786); this difference was significant ($F(1,182)=4.510$, $p=.035$) with a small effect size (Cohen's $d=0.33$). For trait anxiety, the mean females' score (34.67; SD 8.222) was again higher than the males' (31.33; SD 6.611); this was again confirmed by a significant ANOVA: $F(1,162)=9.059$, $p=.003$, with a small effect size (Cohen's $d=0.45$) [the Levene's Statistic was significant, so the Welch's Statistic was reported].

At post-transition, the means followed the same pattern but were non-significant. For state anxiety: $F(1,169)=3.630$, $p=.058$. For trait anxiety: $F(1,169)=2.821$, $p=.095$. The observed gender difference in anxiety occurred only prior to transition.

Table 19. The breakdown of gender anxiety scores at pre- and post-transition

	Pre-Transition (N)		Post-Transition (N)	
	Males (67)	Females (117)	Males (63)	Females (108)
State Mean (SD)	28.16 (5.79)	30.09 (6.01)	26.11 (4.69)	27.81 (6.08)
Trait Mean (SD)	31.33 (6.61)	34.67 (8.22)	28.35 (7.08)	30.49 (8.55)
ESTAS Mean (SD)	40.33 (13.04)	47.39 (13.21)	32.79 (11.09)	36.72 (13.02)
ISTAS Mean (SD)	53.22 (22.59)	65.15 (24.09)	45.06 (18.30)	52.51 (23.55)

Note: values rounded to two decimal points.

Gender Differences and Transition Worry

The gender breakdown of transition worry levels in this sample at pre- and post-transition can be seen in Table 19.

ANOVAs were conducted comparing ESTAS and ISTAS scores at both pre- and post-transition in terms of gender. At pre-transition the mean ESTAS females' score (47.39; SD 13.212) was higher than the males' (40.33; SD 13.039); this difference was significant on one-way ANOVA ($F(1,182)=12.298, p=.001$) with a medium effect size (Cohen's $d=0.54$). For ISTAS, the mean females' score (65.15; SD 24.089) was again higher than the males' (53.22; SD 22.588); this was again supported by the significant ANOVA ($F(1,182)=10.928, p=.001$) with a medium effect size (Cohen's $d=0.51$).

At post-transition, for ESTAS the mean females' score (36.72; SD 13.015) was higher than the males' (32.79; SD 11.089), which was supported by a one-way ANOVA of $F(1,169)=4.031, p=.046$ with a small effect size (Cohen's $d=0.33$). For ISTAS the same was found for female (52.51; SD 23.554) and male (45.06; SD 18.300) scores, the Levene's Statistic was significant, so the Welch's Statistic was reported ($F(1,155)=5.304, p=.023$) with a small effect size (Cohen's $d=0.35$).

Generally, females' anxiety and transition worry scores were higher than males' scores throughout transition. At pre-transition, anxiety scores for female pupils were significantly higher than male pupils. Transition worry for females was significantly higher than males at both pre- and post-transition.

Young People's Feelings About School Transition

In order to determine the feelings and concerns young people have about transition to secondary school in the West Midlands, pupils were initially asked to answer the free-text question how they felt about the upcoming move. The majority of pupils were classified as 'positive' about transition (103, 56%), and a small number felt 'negative' about transition (22, 12%), with 58 (31.5%) pupils reporting both 'positive' and 'negative' comments. These responses can be seen in Table 20., along with these group's responses by gender.

Fifty-one (76.1%) male pupils compared to 52 (44.4%) females gave a 'positive' response. With eight (11.9%) males and 14 (12%) females responding 'negatively'. Eight (11.9%) males gave a 'mixed' response, compared to 50 (42.7%) females. A Pearson χ^2 of gender by category was statistically significant, ($X(3)=21.025, p=.000$), indicating that, overall, male pupils are more likely to report feeling 'positive' about transition, and females more likely to report mixed feelings.

Table 20. The number and % of pupils in each category regarding their feelings about transition with the gender breakdown and pre-transition anxiety scores

	N (%)	Males (%)	Females (%)	State M (SD)	Trait M (SD)
Positive	103 (56.0)	51 (76.1)	52 (44.4)	27.59 (5.33)	30.75 (7.12)
Mixed	58 (31.5)	8 (11.9)	50 (42.7)	30.86 (6.12)	35.81 (7.75)
Negative	22 (12.0)	8 (11.9)	14 (12.0)	34.27 (4.87)	39.59 (5.63)
Indifferent	1 (0.5)	-	1 (0.9)	22.00 (-)*	40.00 (-)*

*Note: values rounded to two decimal points. *No SD is available for these categories as they only contain one participant.*

The Relationship Between Pre-Transition Feelings Categories and Anxiety Scores

In this analysis we test whether the categories of feelings ('positive', 'negative', 'mixed', 'indifferent') were linked with the quantitative measure of anxiety (Spielberger State-Trait scale) at pre-transition. The descriptive statistics for this analysis can be seen in Table 3. The 'indifferent' group was excluded from all analyses as it only contained one participant. For state anxiety, the 'negative' group had the highest pre-transition anxiety scores (34.7) followed by those who have 'mixed' feelings (30.86) and then those who have 'positive' feelings (27.59). An ANOVA comparing the groups on state anxiety found that these differences were highly significant ($F(3,180)=11.271, p=.000$) suggesting that those who reported 'negative' concerns about transition were more likely to have higher state anxiety scores. Similarly, those who felt 'positive' about transition were more likely to have lower state anxiety scores.

For trait anxiety the results were broadly the same: the 'negative' group had the highest pre-transition anxiety scores (39.59) followed by those who have

'mixed' feelings (35.81) and finally those who have 'positive' feelings (30.75). An ANOVA comparing the groups on trait anxiety found that these differences were significant ($F(3,180)=12.630, p=.000$) suggesting that those who reported 'negative' concerns about transition were more likely to have higher trait anxiety scores. Similarly, those who felt 'positive' about transition were more likely to have lower trait anxiety scores.

Changes in Anxiety and Transition Feelings

In this analysis we test whether these feelings categories are associated with temporal changes in anxiety throughout the entire transition. The changes in anxiety levels from pre- to post-transition for these groups are reported (See Table 21. for state and Table 22. for trait.). Only those who took part at both pre- and post-transition were included in this part of the analysis. Even though there was an overall improvement, the 'positive' group still had the lowest mean score, followed by the 'mixed' group, with the 'negative' group still having the highest mean score. An ANOVA comparing these groups on state anxiety at post-transition found that these differences remained significant ($F(2,167)=6.128, p=.003$) suggesting that those who reported 'negative' feelings regarding transition were more likely to report higher state anxiety scores post-transition.

Table 21. The state anxiety of each category regarding pupils' feelings about transition for those at both pre- and post-transition

		Pre-Transition	Post-Transition
	N	State M (SD)	State M (SD)
Positive	95	27.31 (5.19)	25.92 (5.31)
Mixed	55	30.85 (6.22)	28.60 (5.54)
Negative	20	34.55 (4.90)	29.50 (6.21)

Note: values rounded to two decimal points.

For trait anxiety, the same pattern was found between groups; even though there was an overall improvement, the 'positive' group still had the lowest mean score, followed by the 'mixed' group, with the 'negative' group still having the highest mean score. An ANOVA comparing these groups on trait anxiety at post-transition found that these differences were significant ($F(2,167)=9.478, p=.000$)

suggesting that those who reported 'positive' feelings regarding transition were more likely to report lower trait anxiety scores post-transition.

Table 22. The trait anxiety of each category regarding pupils' feelings about transition for those at both pre- and post-transition

		Pre-Transition	Post-Transition
	N	Trait M (SD)	Trait M (SD)
Positive	95	30.75 (7.26)	27.58 (7.48)
Mixed	55	35.85 (7.91)	31.58 (8.06)
Negative	20	39.65 (5.91)	34.75 (8.01)

Note: values rounded to two decimal points.

The pre-transition categories, whilst simple, predicted the overall level of anxiety at both pre- and post-transition. There is a broad correspondence between pupils' feelings regarding transition and their anxiety scores. A negative view of transition was associated with higher anxiety scores, and a positive view of transition was associated with lower anxiety scores, at both pre- and post-transition.

Pupils' Concerns About Transition

Pupils were also asked what their main concerns were about moving to secondary school. The largest group of students reported no concerns (69, 37.5%), the next most reported concern was School Size (32, 17.4%), followed by Social concerns (29, 15.8%). The amount of concerns raised for each category can be seen in the Table 23.

This analysis is to test how pupils' transition concerns differ between genders. These concerns reported by gender can be seen in Table 23., with the largest groups for both males and females reporting no concerns. More females reported social and school size concerns than males, and more females reported multiple concerns than males.

A statistically significant association between gender and the concerns pupils have about moving to secondary school was found ($X(8)=17.760$, $p=.023$).

These results suggest that, overall, whilst the largest group of both male and female pupils had few concerns about the upcoming transition, females were more likely to report social, school size, or multiple concerns.

Table 23. The number and % of pupils in each category regarding their concerns about transition to secondary school with the gender breakdown and pre-transition anxiety scores

	N (%)	Males (%)	Females (%)	State M (SD)	Trait M (SD)
None	69 (37.5)	34 (50.7)	35 (29.9)	27.22 (5.53)	30.99 (7.12)
School Size	32 (17.4)	4 (6.0)	28 (23.9)	29.09 (5.78)	31.91 (6.40)
Social	29 (15.8)	9 (13.4)	20 (17.1)	31.76 (6.66)	35.83 (7.68)
Threats	22 (12.0)	10 (14.9)	12 (10.3)	30.59 (4.94)	33.91 (6.06)
DTW	6 (3.3)	2 (3.0)	4 (3.4)	30.33 (3.67)	35.83 (5.88)
The Work	4 (2.2)	2 (3.0)	2 (1.7)	29.75 (7.50)	39.75 (12.55)
Logistics	1 (0.5)	-	1 (0.9)	22.00 (-)*	24.00 (-)*
Multiple	20 (10.9)	5 (7.5)	15 (12.8)	32.50 (5.96)	39.55 (9.16)
Not Specified	1 (0.5)	1 (1.5)	-	32.00 (-)*	22.00 (-)*

*Note: values rounded to two decimal points. *No SD is available for these categories as they only contain one participant.*

The Relationship Between Pre-Transition Concerns Categories and Anxiety Scores

In this analysis we test whether the categories of concerns (none, social, school size, threats, doing things wrong, the work, logistics, not specified, or multiple concerns) were linked with the quantitative measure of anxiety at pre-transition (Spielberger State-Trait scale). This examines whether particular concerns about transition are linked with greater or less anxiety. A one-way ANOVA was used to analyse pupils' pre-transition anxiety scores in regard to their concerns about transition. The descriptive statistics for this analysis can be seen in Table 21. The 'logistics' and 'not specified' groups were excluded from analyses, as they only contained one pupil each. For state anxiety, the lowest mean scores were found from those who have no concerns (27.22), concerns about school size (29.09), work concerns (29.75), concerns about doing things wrong (30.33), concerns about threats (30.59), social concerns (31.76), and finally the highest

mean was found for those who have multiple concerns about transition (32.50). These groups were compared using ANOVA and these were statistically significant [$F(6,175)=3.645$, $p=.002$], suggesting that those reporting no concerns have lower state anxiety scores whereas those reporting multiple concerns are more likely to have higher state anxiety scores.

For trait anxiety, the lowest mean scores were found from those who had no concerns (30.99), concerns about school size (31.91), concerns about threats (33.91), social concerns and doing things wrong were equal (35.83), those who reported multiple concerns (39.55), and finally the highest mean was found for those who had work concerns about transition (39.75). These means were compared using ANOVA and these were statistically significant [$F(6,175)=4.970$, $p=.000$], suggesting that those reporting no concerns have lower trait anxiety scores, whereas those reporting work concerns are more likely to have higher trait anxiety scores.

Changes in Anxiety and Transition Concerns

In this analysis we test whether these concerns categories are associated with temporal changes in anxiety throughout the entire transition. The changes in anxiety levels from pre- to post-transition for these groups were then explored (See Table 24. for state and Table 25. for trait). Only those who took part at both pre- and post-transition were included in this part of the analysis. An ANOVA comparing these groups on state anxiety at post-transition was conducted, Levene's statistic was significant so Welch's statistic was reported ($F(6,23)=5.100$, $p=.002$), and found that concerns reported at pre-transition was associated with post-transition state anxiety.

Table 24. The state anxiety of each category regarding pupils' concerns about transition for those at both pre- and post-transition

	N	Pre-Transition	Post-Transition
		State M (SD)	State M (SD)
None	62	26.77 (5.23)	25.31 (4.98)
School Size	32	29.09 (5.78)	25.94 (4.57)
Social	25	31.80 (7.11)	29.60 (6.03)

Threats	21	30.71 (5.03)	28.48 (4.41)
DTW	5	30.00 (4.00)	32.60 (3.13)
The Work	4	29.75 (7.50)	28.75 (11.70)
Logistics	1	22.00 (-)*	20.00 (-)*
Multiple	20	32.50 (5.96)	29.60 (6.27)
Not Specified	1	32.00 (-)*	21.00 (-)*

*Note: values rounded to two decimal points. *no SD is available for these categories as they only contain one participant.*

For trait anxiety, the means for each group at pre- and post-transition can be seen in Table 25. An ANOVA comparing these groups on trait anxiety at post-transition was conducted ($F(6,162)=4.590$, $p=.000$), and found that concerns reported at pre-transition was associated with post-transition trait anxiety.

Table 25. The trait anxiety of each category regarding pupils' concerns about transition for those at both pre- and post-transition

	N	Pre-Transition	Post-Transition
		Trait M (SD)	Trait M (SD)
None	62	30.79 (7.22)	26.89 (7.05)
School Size	32	31.91 (6.40)	28.47 (6.30)
Social	25	36.52 (7.84)	32.28 (7.75)
Threats	21	33.71 (6.14)	29.71 (8.04)
DTW	5	35.80 (6.57)	34.00 (6.60)
The Work	4	39.75 (12.55)	36.75 (12.34)
Logistics	1	24.00 (-)*	20.00 (-)*
Multiple	20	39.55 (9.16)	35.20 (9.70)
Not Specified	1	22.00 (-)*	29.00 (-)*

*Note: values rounded to two decimal points. *no SD is available for these categories as they only contain one participant.*

Generally, having no concerns about transition was associated with lower anxiety scores. The concerns associated with higher anxiety scores were less unanimous. Multiple concerns were found to predict higher scores for state and trait anxiety both before and after transition; whereas, concerns regarding work were associated with higher trait anxiety scores pre-transition and higher state and

trait anxiety scores post-transition. Concerns regarding doing things wrong (DTW) were associated with higher state anxiety scores post-transition only.

Appendix 12

The responses to: *'How do you feel about going to secondary school?'*

Participant Number	Response
MG131004	Okay because I will have some of my friends
SM030105	Very calm
SG180105	I feel scared but calm
KH211104	I feel scared
CF090505	Doesn't really bother me
BB110105	I feel calm because I know I can make lots of new friends
BH200605	Excited but nervous
RL010305	Delighted, happy and excited
BD030904	Fine
SW250705	I feel happy and excited
MK230405	I feel happy because it is a new start but sad because I am leaving my friends behind
LE271104	Calm
CW140705	At first I didn't want to go but now I do
KA050805	I feel excited
OJ020705	Calm and good
MP191104	Excited/nervous
CD161104	A bit excited
HN101004	I am quite calm
KO281104	Excited

EO071004	Excited but nervous
TP020205	Good, calm
FW310805	Happy because I will make new friends also nervous
ST210705	I feel calm and relaxed
NS301204	Fine
MC250605	OK I am excited
LS140405	I feel happy because I am able to make a new start
JH220805	I feel confident
CG081204	Excited
OF060505	I feel really scared and upset
GS040205	Sad
CW130205	Sometimes happy but sometimes I want to stay at home with my family
JB310305	Nervous
KP050605	I am very nervous about it but I feel a bit ok because I am in the BFFL group with Kelci, Poppy and Sharday
MS030605	Very nervous and very excited
TH230605	Really excited
OW170904	PE
JR110904	I was really nervous before I knew what school I was going to but now I'm fine
MW161004	Nervous but excited
CP261204	I feel super excited I can't wait
ET091204	I feel very excited about
KB031104	Confident because I'll make new friends

CH080505	Ok
GP050505	Excited but nervous
EH090105	Great
EW050405	I am excited
SE060605	Really happy and a lot of my friends are going
SW230205	Nervous but I think a fresh start will be good for me though
LG180705	I feel excited
HT011204	Ok
AQ020605	I feel excited but nervous
AS081104	I'm nervous but excited
TP020705	Confident and excited
SP181104	I feel happy about it but also a little nervous
EY251004	I am excited about moving up to a new school
MW160605	Not worried and calm and excited
SD050505	Excited and nervous at the same time
OH150805	I am nervous because I don't know anyone. I am also excited because it's a fresh new start!
EW040205	Nervous
TC021104	I am slightly nervous but at the same time, I am extremely excited
MS300605	Excited
JH201204	I am nervous and excited
RE180505	Nervous/excited - a combination of both
SM090605	I feel nervous and excited

FC151204	I am scared and excited
TP191004	Excited
LH200805	Nervous
KV080705	Happy, excited, scared
KH131104	Alright because my brother goes there
RW020205	I worry about my grades and how I will fit in
SH241104	Excited, scared
TM090605	Ok
GB140805	Nervous
AG270405	Ok
LT090205	Good
MU050605	I feel nervous
OJ050105	Proud because I grew up and it will be my childhood forever
MM140904	Great
AG270904	A bit nervous and excited
OC091304	Calm and relaxed
FC241204	I'm excited but nervous
CP221004	I'm excited and keen to make new friends
LH280605	I am nervous and excited
RR171204	Excited to make new friends
AL200904	I feel nervous yet very excited about my years in secondary school
FD260405	I was never before the transition days
GW090305	Excited and nervous also scared

LC040105	A little bit nervous but quite excited too
KS150305	Quite fine
LH080205	Fine
AL160904	I feel excited because there are a lot more lessons but nervous incase I get lost
AB130105	Excited and nervous
JT310105	Very excited, but also a little sad
HJ130205	Extremely nervous and scared but I know my friends are there
CD050705	Excited and scared and nervous
JH020805	Happy
JR311004	Worried more than excited
ER080705	Scared but excited
MT180405	Scared worried and excited
IR221004	I feel quite calm
TC300105	Calm
GB290904	I feel excited but a little bit nervous as well
OP250205	I feel quite nervous because the school is massive
KF291105	Great
RA231204	Nervous
CB130205	Ok
AJ100505	I feel good about secondary school because there are lots of new types of lessons
JP061204	Alright

SS040904	I feel prepared, the only worry I have is getting lost and being alone at dinner
MJ220605	I feel Ok
CE250705	Fine
AF300305	Excited
EM201104	Excited
CC050405	Fine
MP051004	Excited
RA270805	Mixed feelings
CW250205	Excited
OW101204	Not too worried
JW050105	Scared
JT090205	Fine
ML020205	Worried
JG070505	OK
RM120705	Ok
AJ080805	I feel happy, excited
BJ140305	I feel worried
EW140205	I'm a bit nervous that I won't see some of my own friends
HG050605	Really good
GR190105	I am excited
AC2400305	Excited
JS070405	I feel ok about it
EM191104	I feel fine, in fact I'm really happy

RB280605	Nervous and scared of not making friends
JB050705	I feel excited
RN241104	Excited, and a tiny bit nervous
IP190405	Fine, nervous
JS140105	Fine
SM121104	Nervous: what happens if I get bullied by the year 10s?
AJ060904	I feel nervous but excited
EH220805	Excited but a little scared
GP081004	Great but sad
AL201204	OK
BT051004	Calm and happy
RH130205	I'm a bit scared of getting lost
KB220105	Nervous and excited
CJ120805	Very happy and excited
JC261104	I feel fine
IC271204	I am pleased and excited to take part in lessons and clubs
ER141004	Good
GT050405	Awesome!
JH170305	Fine
AP091004	Scared
KM010805	Excited also nervous
MC120405	I feel good
JR061104	I feel good about school
TK300305	Fine

LS181104	I don't want to go
AW020105	I feel fine and eager to start
BB130105	I feel ok
AW160605	Happy
MT280505	A bit scared and nervous but mostly excited
JC090205	Cool
DH260105	I feel quite happy but sort of nervous
OR021004	Amazing
LS080605	I am very excited and seeing the new
JB181004	Fine and a bit scared
SB120605	Excited but nervous
AW240605	Good
RM030505	OK
JB101204	I feel good knowing my friends are going
CH020305	Anxious/calm
AH190405	Calm but kind of worried
OR200105	I am really excited but also worried
SS100105	Excited
JB050305	Fine/prepared
VG271104	Happy
JH060705	Great
GD110904	Nervous for getting lost
SP010405	Scared and very nervous
KA231104	I'm excited

BD290305	I feel good so other teachers can respect me
MR170205	Excited but a little worried
LF190605	I am happy about going to secondary school
OP161004	I feel very happy about it
DB060305	Happy but nervous at the same time
MF270705	I feel happy going to secondary school

The responses to: *'What concerns do you have about going to secondary school?'*

Participant Number	Response
MG131004	I wont get as much support as I do now
SM030105	Nothing
SG180105	I will never see my friends again
KH211104	My friends from my primary school will forget me
CF090505	None
BB110105	I have no concerns
BH200605	Bullies, hard lessons, strict teachers
RL010305	None
BD030904	None at all
SW250705	I might get lost
MK230405	I might get lost
LE271104	I don't think people will like me
CW140705	I don't have any
KA050805	I will get things wrong

OJ020705	None
MP191104	Not fitting in
CD161104	Some
HN101004	Nothing really
KO281104	Not many
EO071004	Not having any true friends that will come to my house
TP020205	Nothing
FW310805	None
ST210705	Getting lost in school and getting detention
NS301204	I have no concerns
MC250605	Nothing
LS140405	None
JH220805	Forgetting my things
CG081204	Nothing
OF060505	The home work
GS040205	Yes
CW130205	My exams and getting lost
JB310305	Making new friends and getting on with the teachers
KP050605	To many to write down
MS030605	Walking to school and being on time and not going to detention
TH230605	None
OW170904	Fitting in
JR110904	Nothing
MW161004	None

CP261204	I think I might get lost and be late for class
ET091204	that I have to carry everything round with me
KB031104	None
CH080505	Nothing
GP050505	Swapping classrooms and not making friends
EH090105	None
EW050405	None
SE060605	None
SW230205	That people will bully me and that teachers will pick favourites
LG180705	Getting lost
HT011204	People not liking me
AQ020605	Having too much homework and getting detention
AS081104	Getting lost or being late
TP020705	Leaving my other friends
SP181104	None
EY251004	I am worried I might get lost
MW160605	Losing all my friends that are going to a different school
SD050505	None
OH150805	I can make a lot of mistakes. No one will want to be my friends
EW040205	Making friends
TC021104	My secondary school is so big that I sometimes worry that I might get lost
MS300605	Its big
JH201204	Nothing really concerns me

RE180505	Getting lost and being late for lessons (Just to say I wasn't all worried until you mentioned all the things that could go wrong)
SM090605	Getting picked on
FC151204	It will be challenging
TP191004	Taller kids
LH200805	None really
KV080705	Making new friends
KH131104	That my friends wont go there
RW020205	Will I fit in? Will anyone talk to me?
SH241104	None
TM090605	Nothing
GB140805	It being not the right place for me
AG270405	Don't know
LT090205	Don't know
MU050605	about making friends
OJ050105	About being bullied and hurt
MM140904	Nothing really
AG270904	That I will get lost
OC091304	The teachers liking me
FC241204	Not having time to socialise, getting into trouble and being bullied
CP221004	I don't know if I'll find a club to fit into
LH280605	I will get bullied
RR171204	I don't
AL200904	Making new friends

FD260405	I don't have a lot
GW090305	Getting lost people making fun of me. Bigger kids
LC040105	Getting detention and homework
KS150305	Not knowing what to expect
LH080205	Not many
AL160904	Getting lost
AB130105	That people wont like me
JT310105	Nothing
HJ130205	Big kids
CD050705	Having no friends
JH020805	None
JR311004	Being alone, getting lost, losing friends, bullies
ER080705	Getting lost
MT180405	Getting lost
IR221004	Getting lost
TC300105	Getting lost
GB290904	The big kids
OP250205	A lot of students
KF291105	No
RA231204	Other children
CB130205	I don't know anybody
AJ100505	Nothing except from getting bullied
JP061204	None
SS040904	Getting lost, being alone

MJ220605	Other students
CE250705	None
AF300305	None
EM201104	Bullied
CC050405	Bullying
MP051004	Find my way around
RA270805	About the bigger people and switching classes
CW250205	None
OW101204	Bullys
JW050105	I will get lost
JT090205	Bigger children
ML020205	None
JG070505	None
RM120705	Losing my way around
AJ080805	not making new friends
BJ140305	I won't see anyone I know
EW140205	I won't see my friends a lot
HG050605	Nothing
GR190105	Being late for school
AC2400305	Nothing
JS070405	That I might get lost
EM191104	Nothing
RB280605	Friend that I won't have
JB050705	I don't have any concerns

RN241104	None
IP190405	Older kids bullying
JS140105	None
SM121104	Getting bullied about things I do, like, say or wear
AJ060904	Leaving some people I know
EH220805	Getting lost
GP081004	All of the big people
AL201204	Nothing
BT051004	None
RH130205	Just getting lost and not making new friends
KB220105	Being lonely
CJ120805	None
JC261104	I'm concerned I'd get lost between lessons
IC271204	It being so big
ER141004	Getting lost
GT050405	Nothing, but getting lost
JH170305	Not making friends
AP091004	Getting lost big kids
KM010805	Getting lost
MC120405	Home work
JR061104	I don't
TK300305	None
LS181104	Getting lost, being bullied
AW020105	None

BB130105	Getting lost
AW160605	Nothing
MT280505	Not making friends
JC090205	None
DH260105	That I'll be picked on
OR021004	People will make fun of me because I am dyslexic
LS080605	Nothing
JB181004	I don't have any
SB120605	Getting lost
AW240605	None
RM030505	Nothing much
JB101204	None
CH020305	I might get bullied
AH190405	Making friends
OR200105	I might get lost
SS100105	Nothing
JB050305	Nothing
VG271104	Swimming
JH060705	Nothing
GD110904	Bullying
SP010405	Getting lost
KA231104	Classes that I can't get to in time
BD290305	Nothing
MR170205	Making sure the teachers like me

LF190605	I don't have any concerns
OP161004	Finding the classes
DB060305	Teachers I mainly want to know whether they are strict or not
MF270705	NONE

Appendix 13



PRIVATE

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16 March 2017 Dear Miss Fontaine

Study Title and BSREC Reference: *Resilience of Bullied LGBTQ Adolescents*
REGO-2016-1898

Thank you for submitting your revisions to the above-named study to the University of Warwick's Biomedical and Scientific Research Ethics Sub-Committee for approval.

I am pleased to confirm that approval is granted and that your study may commence.

In undertaking your study, you are required to comply with the University of Warwick's *Research Data Management Policy*, details of which may be found on the Research and Impact Services' webpages, under "Codes of Practice & Policies" » "Research Code of Practice" » "Data & Records" » "Research Data Management Policy", at:
http://www2.warwick.ac.uk/services/ris/research_integrity/code_of_practice_and_policies/research_code_of_practice/datacollection_retention/research_data_mgt_policy

You are also required to comply with the University of Warwick's *Information Classification and Handling Procedure*, details of which may be found on the University's Governance webpages, under "Governance" » "Information Security" » "Information Classification and Handling Procedure", at:
<http://www2.warwick.ac.uk/services/gov/informationsecurity/handling>.

Investigators should familiarise themselves with the classifications of information defined therein, and the requirements for the storage and transportation of information within the different classifications:

Information Classifications:

<http://www2.warwick.ac.uk/services/gov/informationsecurity/handling/classifications>

Handling Electronic Information:

<http://www2.warwick.ac.uk/services/gov/informationsecurity/handling/electronic/>

Handling Paper or other media

<http://www2.warwick.ac.uk/services/gov/informationsecurity/handling/paper/>.

Please also be aware that BSREC grants **ethical approval** for studies. **The seeking and**

obtaining of all other necessary approvals is the responsibility of the investigator. These other approvals may include, but are not limited to:

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1. Any necessary agreements, approvals, or permissions required in order to comply with the University of Warwick's Financial Regulations and Procedures.
2. Any necessary approval or permission required in order to comply with the University of Warwick's Quality Management System and Standard Operating Procedures for the governance, acquisition, storage, use, and disposal of human samples for research.
3. All relevant University, Faculty, and Divisional/Departmental approvals, if an employee or student of the University of Warwick.
4. Approval from the applicant's academic supervisor and course/module leader (as appropriate), if a student of the University of Warwick.
5. NHS Trust R&D Management Approval, for research studies undertaken in NHS Trusts.
6. NHS Trust Clinical Audit Approval, for clinical audit studies undertaken in NHS Trusts.
7. Approval from Departmental or Divisional Heads, as required under local procedures, within Health and Social Care organisations hosting the study.
8. Local ethical approval for studies undertaken overseas, or in other HE institutions in the UK.
9. Approval from Heads (or delegates thereof) of UK Medical Schools, for studies involving medical students as participants.
10. Permission from Warwick Medical School to access medical students or medical student data for research or evaluation purposes.
11. NHS Trust Caldicott Guardian Approval, for studies where identifiable data is being transferred outside of the direct clinical care team. Individual NHS Trust procedures vary in their implementation of Caldicott guidance, and local guidance must be sought.
12. Any other approval required by the institution hosting the study, or by the applicant's employer.

There is no requirement to supply documentary evidence of any of the above to BSREC, but applicants should hold such evidence in their Study Master File for University of Warwick auditing and monitoring purposes. You may be required to

supply evidence of any necessary approvals to other University functions, e.g. The Finance Office, Research & Impact Services (RIS), or your Department/School.

May I take this opportunity to wish you success with your study, and to remind you that any Substantial Amendments to your study require approval from BSREC before they may be implemented.

Yours sincerely

pp.

Professor John Davey
Chair
Biomedical and Scientific Research Ethics Sub-Committee

Biomedical and Scientific Research Ethics Sub-Committee Research & Impact
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Coventry, CV4 8UW.
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http://www2.warwick.ac.uk/services/ris/research_integrity/researchethicscommittees/biomed

A handwritten signature in black ink, appearing to read 'E Dight'.

Appendix 14



Study Title: Resilience in Bullied LGBTQ Adolescents

Investigator(s): Charlotte Fontaine

Introduction

You are invited to take part in a study. Before you decide, you need to understand why the study is being done and what it would involve for you. Please take the time to read the following information carefully. Talk to others about the study if you wish.

(Part 1 tells you the purpose of the study and what will happen to you if you take part. Part 2 gives you more detailed information about the conduct of the study)

Please ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

PART 1

What is the study about?

This study wants to work out what helps improve resilience for LGBTQ individuals who have been bullied. This will be done through questionnaires, which will ask about your mental wellbeing, any name calling experiences, resilience, sense of humour, stigma consciousness, perceived social support, and your age, gender, sexual identity, and ethnicity.

Do I have to take part?

It is entirely up to you to decide. This information sheet will describe the study, by completing the online questions, you are giving your consent for the

information that you have supplied to be used in this study and formal signed consent will not be collected. You will be free to withdraw at any time, without giving a reason and this will not affect you or your circumstances in any way.

What will happen to me if I take part?

You will be invited to answer questions about your mental wellbeing, resilience, stigma consciousness, name calling experiences, perceived social support, and sense of humour. You will be asked to answer these individually and privately, but this information document provides you with the contact details of the researchers to help with any questions you may have. There will be no follow-up for this study and you will not be asked to fill out more questionnaires at a later date. Your responses will be completely private and no one will see your answers apart from the researcher and their supervisors. All of your answers will be given a random number that has no obvious connection with you in order to keep your responses private. The questionnaire should take between 10 and 15 minutes.

What are the possible disadvantages, side effects, risks, and/or discomforts of taking part in this study?

As the questions ask about your experiences of name calling, they may cause you to feel discomfort. You will be completely free to take breaks at any time, to stop taking part in the study completely or to ask for help from the researcher.

If the study has caused you any distress, you can contact the researcher or supervisors:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@warwick.ac.uk

Also, the Youth Space website www.youthspace.me has a variety of resources available and advice for adolescents, and www.rethink.org has information for all ages.

What are the possible benefits of taking part in this study?

By taking part in this study, you will be helping us to understand what can improve the experience for bullied LGBTQ individuals.

Expenses and payments

By taking part in the study you will be able to enter into a competition to win one of five £20 prizes. To do this you will need to enter your email address in the box provided once all the questions have been answered. If you do not wish to provide your email address then leave this box blank and continue to the end of the survey.

What will happen when the study ends?

The data will be stored securely in a locked cabinet in the unit of Mental Health and Wellbeing, Warwick Medical School, University of Warwick for 10 years. The researcher and their supervisors will have access to the anonymised data. The electronic data will be kept on a separate laptop.

Will my taking part be kept confidential?

Yes. We will follow strict ethical and legal practice and all information about you will be handled in confidence. Further details are included in Part 2.

What if there is a problem?

Any complaint about the way you have been dealt with during the study or any possible harm that you might suffer will be addressed. Detailed information is given in Part 2.

This concludes Part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2

Who is organising and funding the study?

This study is being run by a student researcher from the University of Warwick, who will be supervised by an experienced professor.

What will happen if I don't want to carry on being part of the study?

Participation in this study is entirely voluntary. Refusal to participate will not affect you in any way. If you decide to take part in the study, you will continue to the consent page after you have read this information sheet where you will need to confirm that you consent to taking part in this questionnaire, which means that you have given your consent to participate.

If you agree to participate, you may nevertheless withdraw from the study at any time without affecting you in any way. You have the right to withdraw from the study completely and decline any further contact by study staff after you withdraw.

Who should I contact if I wish to make a complaint?

Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:

Head of Research Governance

Research & Impact Services

University House

University of Warwick

Coventry

CV4 8UW

Tel: 024 76 522746

Email: researchgovernance@warwick.ac.uk

Will my taking part be kept confidential?

All the data will be kept confidential; this means no one will see your answers apart from the researcher and supervisors. All of your answers will be kept private. In order to keep your all of your responses private you will be given a random number that has no obvious connection with you. Only the researcher and their supervisor will have access to this data, which will be stored securely at the University of Warwick. Anonymised data means that your responses will be put with your random number, not your name. Any identifiable information will be removed before any publication. You will not be linked to the data in any way.

What will happen to the results of the study?

The results of the data will be presented in the researcher's project and the organisations involved will also be made aware of the findings. The study will be submitted to journals for publication. This means the results of the study will be available to the public, but your answers will still be anonymous and private.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the University of Warwick's Biomedical and Scientific Research Ethics Committee (BSREC):
REGO-2016-1898 16/03/17

What if I want more information about the study?

If you have any questions about any aspect of the study, or your participation in it, not answered by this participant information leaflet, please contact:

Charlotte Fontaine: C.Fontaine@warwick.ac.uk

Max Birchwood: M.J.Birchwood@warwick.ac.uk

Charlotte Connor: Charlotte.Connor@warwick.ac.uk

Thank you for taking the time to read this participant information leaflet.

Consent

By ticking the box below you are consenting to take part in the survey. This means that you have read and understand the information sheet on the previous page, you understand that participation is voluntary and you are free to withdraw at any time, you understand that relevant sections of your answers may be looked at by individuals at the University of Warwick, and you agree to take part in the survey.

☐ I consent to taking part in this survey

Appendix 15

Which of the following options best describes how you think of yourself?

1. Heterosexual or Straight,
2. Gay or Lesbian,
3. Bisexual,
4. Other
5. Prefer not to say

Those who select 'Other' will be given the option to write their answer in a text box.

Choose which answer best describes where you live:

- ☐ Home owner
- ☐ Living with parent(s)
- ☐ Living with relative(s)
- ☐ Living in rented accommodation
- ☐ Living in social housing
- ☐ Living in sheltered accommodation
- ☐ Homeless/No fixed abode

Are you currently:

- ☐ Employed
- ☐ Self-Employed
- ☐ Unemployed
- ☐ A Homemaker
- ☐ A Student
- ☐ In the Armed Forces
- ☐ Retired
- ☐ Unable to work

What is your ethnic group?

Choose one option that best describes your ethnic group or background

White

1. English / Welsh / Scottish / Northern Irish / British
2. Irish

3. Gypsy or Irish Traveller
4. Any other White background, *please describe*

Mixed / Multiple ethnic groups

5. White and Black Caribbean
6. White and Black African
7. White and Asian
8. Any other Mixed / Multiple ethnic background, *please describe*

Asian / Asian British

9. Indian
10. Pakistani
11. Bangladeshi
12. Chinese
13. Any other Asian background, *please describe*

Black / African / Caribbean / Black British

14. African
15. Caribbean
16. Any other Black / African / Caribbean background, *please describe*

Other ethnic group

17. Arab
18. Any other ethnic group, *please describe*

Have you ever been bullied because of your sexual identity? Yes/No

Appendix 16

Homophobic Content Agent Target Scale

Agent Scale:

Some kids call each other names such as gay, lesbo, fag, etc. How many times during the last week did you say these things to:

	Never	1 or 2 times	3 or 4 times	5 or 6 times	7 or more times
A friend	1	2	3	4	5
Someone I did not know	1	2	3	4	5
Someone I did not like	1	2	3	4	5
Someone I thought was gay	1	2	3	4	5
Someone I did not think was gay	1	2	3	4	5

Target Scale:

Some kids call each other names such as gay, lesbo, fag, etc. How many times in the last week did the following people call you these things:

	Never	1 or 2 times	3 or 4 times	5 or 6 times	7 or more times
A friend	1	2	3	4	5
Someone I did not know	1	2	3	4	5
Someone who did not like me	1	2	3	4	5
Someone I thought was gay	1	2	3	4	5
Someone I did not think was gay	1	2	3	4	5

Appendix 17**The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)**

Below are some statements about feelings and thoughts. Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5

I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Appendix 18

The Brief Resilience Scale

Please respond to each item by marking one box per row

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I tend to bounce back quickly after hard times	1	2	3	4	5
I have a hard time making it through stressful events	1	2	3	4	5
It does not take me long to recover from a stressful event	1	2	3	4	5
It is hard for me to snap back when something bad happens	1	2	3	4	5
I usually come through difficult times with little trouble	1	2	3	4	5
I tend to take a long time to get over set-backs in my life	1	2	3	4	5

Appendix 19

Stigma-Consciousness Questionnaire for Gay Men and Lesbians

Please indicate the degree to which you agree or disagree with each statement below.

Stereotypes about my sexual identity have not affected me personally

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

I never worry that my behaviors will be viewed as stereotypical of those with my sexual identity

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

When interacting with heterosexuals who know of my sexual identity, I feel like they interpret all my behaviours in terms of my sexual identity

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

Most heterosexuals do not judge those with my sexual identity on the basis of their sexual preference

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

My sexual identity does not influence how those with the same sexual identity act with me

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

I almost never think about my sexual identity when I interact with heterosexuals

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

My sexual identity does not influence how people act with me

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

Most heterosexuals have a lot more homophobic/transphobic thoughts than they actually express

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

I often think that heterosexuals are unfairly accused of being homophobic/transphobic

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

Most heterosexuals have a problem viewing people with my sexual identity as equals

1	2	3	4	5
Strongly disagree	Disagree	Neither	Agree	Strongly agree

Appendix 20

Multidimensional Scale of Perceived Social Support

Please indicate the degree to which you agree or disagree with each statement below.

There is a special person who is around when I am in need

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

There is a special person with whom I can share joys and sorrows

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

My family really tries to help me

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I get the emotional help & support I need from my family

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I have a special person who is a real source of comfort to me

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

My friends really try to help me

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I can count on my friends when things go wrong

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I can talk about my problems with my family

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I have friends with whom I can share my joys and sorrows

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

There is a special person in my life who cares about my feelings

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

My family is willing to help me make decisions

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree

I can talk about my problems with my friends

1	2	3	4	5	6	7
Very strongly disagree	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly agree